COUNTY OF SAN FRANCISCO
ENT OF CITY PLANNING

DRAFT ENVIRONMENTAL IMPACT REPORT

FERRY BUILDING COMPLEX



EE 81.63

October 1982

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FERRY BUILDING COMPLEX

The Embarcadero

Ferry Building/World Trade Center

Agriculture Building

Pier One

DRAFT

ENVIRONMENTAL IMPACT REPORT

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I. SUMMARY

Project Description

The project would consist of rehabilitation of the Ferry Building and the Agriculture Building and new construction at Pier One; all are on The Embarcardero on San Francisco's northeastern waterfront. The Ferry Building would contain a mix of office, retail and restaurant uses. The Agriculture Building would contain a retail food hall on the ground floor, and the World Trade Club would occupy the second and third floors. Pier One would contain offices and a restaurant in a new building that would replace the existing shed. The Pier One bulkhead building would contain a garage. The Ferry Building and the Agriculture Building are listed in the National Register of Historic Places, and the Ferry Building is a registered San Francisco Landmark. The Pier One bulkhead building [1] is listed on the Department of City Planning's 1976 Architectural Survey. Pier One includes a finger pier with shed; the shed is not cited for architectural merit.

The project would include about 308,000 occupied square feet of office space, 49,000 occupied square feet of restaurants and 66,000 occupied square feet of retail space. In addition, 35,100 square feet would be occupied by the World Trade Club, a private dining club. There would be a net increase of about 96,000 occupied square feet of offices, 47,200 occupied square feet of restaurants (plus 13,100 additional square feet for the World Trade Club) and 63,000 occupied square feet of retail. Overall, the project would have two-thirds office and one-third retail/restaurant, counting the World Trade Club. About 60,400 square feet of public space in galleria and atrium areas would be provided inside buildings. Exterior areas of the 49-acre site would include more than four acres of public open space.

Environmental Impacts

The west facade of the Ferry Building would be restored to its original appearance, except that the ground level arcade would be enclosed, not open. Three facades of the Agriculture Building would be retained; the remainder of the building would be demolished. The project would remove original historic building material from both the Ferry and Agriculture Buildings, and some historic material that was removed from the Ferry Building would be replaced.

The project would require amendments to the San Francisco Comprehensive Plan and other plans with respect to the removal of the Pier One shed and the amount and mix of uses proposed on Pier One and in the Agriculture Building. These amendments, if adopted, would result in more intensive use of the site (1,000 more square feet of office and 38,100 more square feet of commercial/recreation) than is envisioned by the Northeastern Waterfront Plan of the Comprehensive Plan; the Special Area Plan No. 1: San Francisco Waterfront of the Bay Conservation and Development Commission; and the Total Design Plan, endorsed by the City Planning Commission and approved by the Port Commission and the Bay Commission, which implements the Special Area Plan.

The project would increase public access to the waterfront and reduce the amount of deck over water by about 17,200 square feet. Views of the water would be opened up by removing the National Car Rental office building and parking spaces north of the Ferry Building.

The project would remove 66 existing short-term spaces and 342 existing long-term spaces, for a total of 408 spaces; the mechanical parking structure inside the Pier One bulkhead building would accommodate 375 cars. There would be a net decrease of about 33 spaces on the site. Total net increase in parking demand would be 170 spaces. Parking would be priced to encourage short-term use. There would be a net deficit of 462 long-term parking spaces and a net surplus of 259 short-term parking spaces on the site. There would be a net increase of about 8460 person trips to the site each day, resulting in about 2600 additional transit trips daily. In the PM peak traffic hour, there would be a net increase of 160 vehicle trips and 325 transit trips due to the project. The project would require 19 off-street loading spaces. No off-street loading spaces are proposed by the project. Instead, the demand is proposed to be accommodated curbside on The Embarcadero.[2] About 30 feet of the east side of The Embarcadero (northbound) is within site boundaries.

During the approximately 3.5 years of construction, The Embarcadero would occasionally be blocked by trucks and equipment. Pedestrians and other users (joggers, bicyclists) would not be able to use sidewalks on the east

side of The Embarcadero during this time. Pile driving would affect existing tenants in site buildings for 3-5 months, with noise levels as high as 88 dBA at 50 feet. Jackhammers would cause similar noise levels. If the project were to include double-shift construction, impact noise would exceed nighttime noise limits established by the City's noise ordinance and could affect area hotel users and residents. The sponsor would have to obtain a special permit from the Department of Public Works to exceed nighttime noise limits.

According to the City's housing formula, the office portion of the project would generate a housing demand of between 210 and 325 units.

The project would cause permanent or temporary relocation of most of the existing 100 tenants on the site. Many are small, import-export and world-trade related businesses that the sponsor would encourage to return. Two tenants occupying a large space have long-term leases and do not intend to leave the site. The World Trade Club which currently occupies 22,000 square feet on the third floor of the Ferry Building would relocate to the upper two floors of the Agriculture Building. It is not yet known where the other existing large tenants would ultimately locate in the project. Tenants would be provided space on site while their space is rehabilitated.

The project would impact marine life and water quality as a result of adding and removing piles and deck and of dredging for the south tidal stairs.

The project would contribute to cumulative growth that is occurring primarily downtown, and spreading to areas South of Market, North of Market and along the waterfront. The project would contribute to cumulative impacts including transportation, air quality, energy, noise (during construction), and housing demand.

Mitigation Measures Proposed as Part of the Project

Mitigation measures proposed as part of the project and measures which would have to be implemented by public agencies are listed below. Other mitigation measures under consideration or rejected by the sponsor are discussed in detail on pages 184-199 of this EIR.

Historic Resources

1. The project would preserve and rehabilitate the historic structures on the site, including the City side facade of the Ferry Building, three facades of the Agriculture Building, and the exterior of the Pier One bulkhead building.

2. The project would preserve and restore interior architectural design elements of historic value such as: the Great Seal of California, roof trusses, decorative brickwork, skylights, windows, arches and other architectural features in the Ferry Building, as described on pages 99-109, Environmental Impacts, of this EIR.

3. The project would remove modern additions that detract from the Ferry and Agriculture Buildings' architectural and/or historic character, as described on pages 99-109, Environmental Impacts, of this EIR.

4. The project sponsor would provide photographic documentation of building restoration of the Ferry and Agriculture Buildings according to standards of either the Historic American Building Standards or Historic American Engineering Record, established by the National Park Service.

5. The project sponsor would follow recommendations of on-going design studies, to develop alternatives to the flat roof and square windows proposed for the north and south facades of the Ferry Building.

6. A structural engineer experienced in rehabilitation techniques would be present at the site when work on the Agriculture Building takes place, to ensure that the integrity of the building would not be impaired (for example, by pile driving and other action needed to stabilize the building).

Public Access, Recreation and Open Space

7. The project would include site improvements for public use, such as street furniture, lighting, special paving, planting, and signage and other features to clearly delineate public spaces.

8. The project sponsor would follow recommendations of a wind analysis so that the project design would reduce any uncomfortable or hazardous air flows at entrances to project buildings, and at the end of Pier One. Wind breaks would be provided if necessary, at the open ends of the gallerias to reduce drafts through the buildings.

9. Project trees would be widely spaced and pruned so as not to obstruct views of the water from The Embarcadero.

Transportation

10. A "transportation broker" from the building management staff would be designated to disseminate transit information (route maps, schedules), sell transit passes and tickets, and coordinate ride-sharing and vanpooling.

11. The project would provide racks for bicycle and motorcycle parking at a secure on-site location.

12. Management and lease agreements with tenants would be structured to encourage use of flex-time scheduling, to reduce traffic at peak hours.

13. The parking rates in Pier One would be controlled to encourage only short-term use oriented toward patrons of the retail and restaurant facilities. Monthly parking spaces would not be provided.

14. Carpool/vanpool spaces for project employees would be provided in the proposed parking garage.

15. The project sponsor would conduct a survey in accordance with methodology approved by the Department of City Planning, to assess actual trip generation patterns of project employees and actual pick-up and drop-off areas for carpools and vanpools, one year after occupancy or when determined necessary by the Department of City Planning.

16. Unobstructed crosswalks around all of the site would be provided to assure easy pedestrian movement. The project sponsor would control the location of news racks, garbage cans and other obstacles by specifying appropriate locations for them and integrating them in the final design plan.

Noise

17. The project sponsor would follow recommendations of a detailed acoustical analysis to determine measures to reduce noise levels and to incorporate noise insulation features in the proposed design.

18. The project sponsor would require the construction contractor to use state-of-the-art muffling techniques for noisy equipment.

Urban Design and Views

19. The project would use non-reflective glass to reduce glare.

Energy

20. The project would conserve energy by maximizing use of natural heating and cooling, and by not air conditioning interior spaces in the gallerias and atrium.

21. Title 24 energy conservation standards would be met to the maximum extent possible in the rehabilitated project buildings; historic buildings are not required to meet these standards.

Employment, Housing and Fiscal Factors

22. The project sponsor would inform existing tenants six months in advance of rehabilitation that they must relocate, and desires that small water-related and world-trade-related firms return to the site after rehabilitation.

Geology and Seismicity

23. The project sponsor would monitor ground elevation changes during construction to note whether construction activities were causing subsidence; if subsidence were to occur, the project sponsor would take action to prevent it.

24. The project sponsor would have a qualified geotechnical consultant analyze potential project impacts in detail prior to construction, and would follow the consultant's recommendations for foundation repair, pile replacement, and site preparation. The project sponsor would follow the recommendations of a California-licensed civil or geotechnical engineer for any construction on the site.

Other Mitigation Measures

25. The project sponsor would prepare an on-street parking plan -- including the location of all yellow, green, white, blue and red curbs -- for freight and service delivery operations, to reduce congestion and vehicle/pedestrian conflicts. The hours for service delivery would be limited to 6-10:30 AM, when pedestrian activity is low. The plan would be developed in consultation with the Port, the Department of Public Works, the Police Department, and the City Planning Department. The Department of Public Works would be the implementing agency.

26. Removal of The Embarcadero freeway would improve public access to the waterfront, improve shoreline appearance, increase views of the Bay, and reduce noise and carbon monoxide levels. Caltrans would have to implement this measure, which is currently the subject of a combined EIR/EIS.

27. Removal of parking under The Embarcadero freeway and construction of the wide crosswalk proposed by the project architects could improve pedestrian access to the site. The Port would be responsible for implementation.

28. A major public plaza in front of the Ferry Building is proposed in the Northeastern Waterfront Plan. Such a plaza could improve public access to the site and waterfront appearance and give the Ferry Building more prominance, particularly if done in combination with removal of the freeway. This mitigation measure would require realignment of The Embarcadero in front of the Ferry Building, and could be accomplished through joint action by Caltrans, the Port, the Department of Public Works and the City Planning Department.

29. Realignment of The Embarcadero roadway north of the site would improve traffic circulation on the roadway. The Port and the Department of Public Works would have to realign the roadway.

30. A transit connection between Market Street and the project would provide a direct link between ferries, the project, and the downtown. Muni could route a Market Street bus to the central entrance of the Ferry Building.

31. Adjustment of the traffic signal timing for pedestrians crossing in front of the Agriculture Building could be implemented to improve pedestrian access and reduce hazards. The Department of Public Works could implement this measure.

E. Alternatives

Alternatives to the proposed project that are considered in this EIR include:

(1) No Project
(2) Restoration of the Three Buildings
(3) Design Alternatives for the Ferry Building and Pier One
(4) No Plan Amendments
(5) Additional Office and/or Retail Development
(6) Parking Alternatives
(7) Other Alternatives

Footnotes:

1. A bulkhead is a wall that forms a fixed shoreline; a bulkhead building is a three dimensional structure on top of a bulkhead. Often, the term "bulkhead" is used to represent both the wall and the building on top of it. As this EIR uses the term "bulkhead" to discuss the location of the shoreline, the two terms will not be used interchangeably.

2. According to the Planning Code (Section 155), the proposed 19 curbside loading spaces would not be considered off-street loading spaces. Neither does the Department of Public Works consider the spaces to be off-street. (Jeffery Lee and Frank Moss, Jr., November 24, 1981. A copy of the letter is on file with the Office of Environmental Review.) The proposed loading configuration would require approval of the Planning Commission as a Variance within a Conditional Use authorization. (See Project Description, page 33.)

II. PROJECT DESCRIPTION

A. Sponsor's Objectives

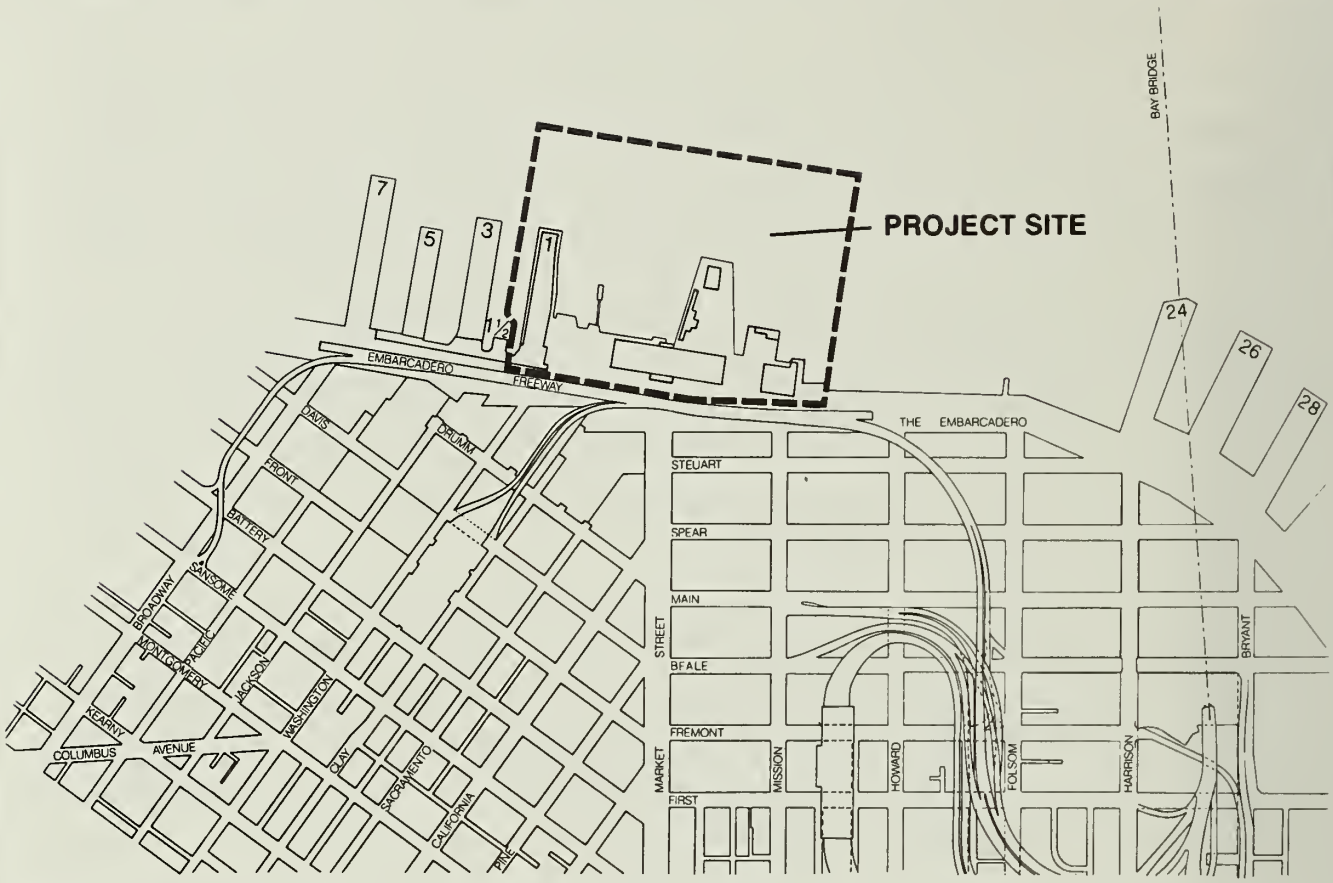
Continental Development Corporation of San Francisco proposes to develop a mixed-use project centered at the Ferry Building on San Francisco's Northeastern Waterfront. (See Figure 1, p. 10.) The sponsor's objective is to provide office, retail, restaurant, public open space and recreation facilities around the theme of international world trade, and to realize a return on investment. The project, known as the Ferry Building Complex, would include rehabilitation of the Ferry Building and the Agriculture Building, construction of a three-story building on Pier One after demolition of a pier shed, and rehabilitation of the Pier One bulkhead building which would contain a mechanical garage. The project architects are I.M. Pei & Partners, in association with Gensler & Associates.

The Port of San Francisco, owner of the land, would lease the site to the sponsor, and would receive ground rent and a percentage of the profits from retail and restaurant sales and office rents. It is the objective of the Port and the sponsor to rehabilitate buildings on the site so as to maximize the site's development potential.

B. Project Location

The site is on the east side of The Embarcadero roadway between Mission Street on the south and Washington Street on the north. The main entrance to the Ferry Building is under the 235-foot-tall clocktower at the foot of Market Street. The site boundaries contain about 49 acres in Assessor's Block 9900; 37 acres are submerged, and 12 are land area. About 1.6 acres within the site boundaries are excluded from the sponsor's leasehold[1], including an easement for a BART ventilation structure and the restaurant on top of and adjacent to it, the Golden Gate Ferry terminal, and the restaurant east of the Agriculture Building. The site boundary lines are illustrated in Figure 2, (p. 13). The western boundary consists of about 1,650 feet of frontage on The Embarcadero, following a line 27 feet east of the east face of The Embarcadero freeway columns. The southern boundary line is 150 feet south of and parallel to the south facade of the Agriculture Building, extending about 1,200 feet eastward into the Bay to the U.S. Pierhead Line.[2]

figure 1 PROJECT LOCATION





source: Planning Analysis & Development

The eastern boundary follows the pierhead line, extending about 1,700 feet northward. The northern property line extends from the pierhead line (about 1,050 off-shore) to a point half-way between Pier One and Pier 1-1/2.

Footnotes:

1. The 1.6 acres reduces the 49 site acres controlled by the sponsor to 47.4 acres.
2. The U.S. Pierhead Line, also called a "harbor line" was used by the U.S. Army Corps of Engineers to distinguish navigable and non-navigable waters, which defined its areas of jurisdiction. In 1980, changes in the Corps' jurisdiction in the Bay diminished the importance of this line of demarcation, although it still appears on some maps.

C. Project Description

The proposed Ferry Building Complex would include rehabilitation of the Ferry and Agriculture Buildings, and construction of a three-story building behind the bulkhead building on Pier One after demolition of the pier shed. The Ferry Building would contain a mix of office, retail and restaurant uses (about 147,000 square feet, 66,000 square feet, and 33,000 square feet, respectively), including a new partial fourth floor. The Agriculture Building would contain a food hall at ground level and the World Trade Club on the second and a new third floors. Pier One would include about 161,000 square feet of office and 4,000 square feet of restaurant use. In the three buildings, overall, there would be about 308,000 square feet of office, 49,000 square feet of restaurant and 66,000 square feet of retail space. Floor area above and throughout the EIR is given in terms of occupied square feet, as opposed to gross square feet, because of the project's large amount of interior public space (60,400 square feet) and because it involves rehabilitation of older structures with thick walls.[1]

The Ferry and Agriculture Buildings are landmarks listed on the National Register of Historic Places; the Ferry Building is also a City landmark. Both structures would undergo extensive restoration and rehabilitation. The bulkhead building of Pier One also would be substantially rehabilitated. The Pier One shed would be demolished and replaced with new construction. The project would include about 60,400 square feet of public space inside buildings, including a galleria in each building and a central atrium in the Ferry Building, and about four acres of exterior public open space. About 375

parking spaces are proposed in a mechanical garage on Pier One (in the existing bulkhead building). Platform fill[1] to the north and south of the Ferry Building would be reconstructed where deteriorated. Some 1.25 acres of fill would be permanently removed. Bayside additions to the Ferry Building would extend about 20 eastward, over the water. Figures 2 and 3 (pp. 13-14) show the existing and the proposed site plans and Figure 4 (p. 15) is a photograph of the model for the proposed design. Figure 5 (p. 16) shows the City side side elevation of the project and photographs of the buildings now on the site.

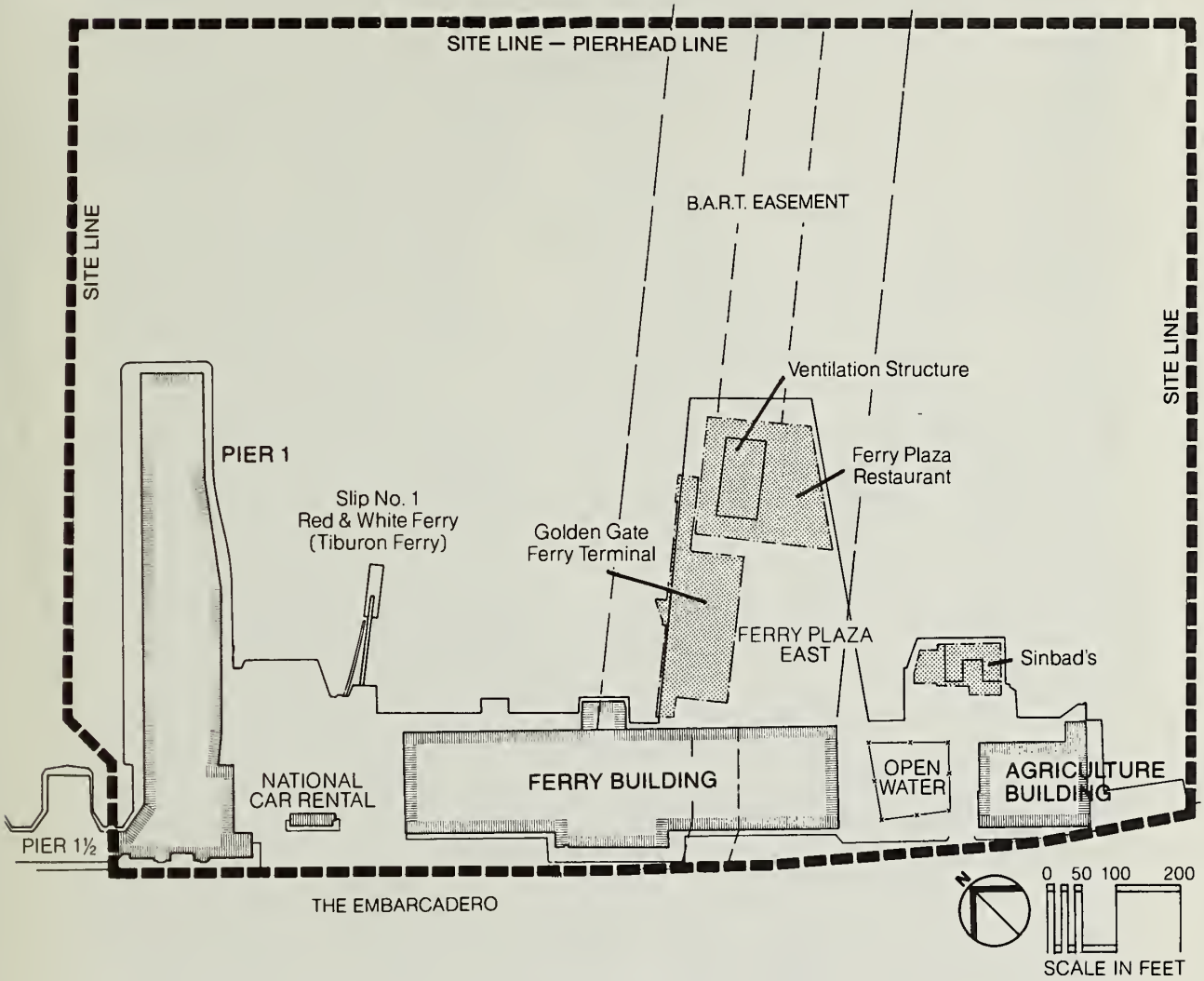
Figures 6-8 (pp. 17-19) show the proposed Ferry Building plans and sections. The first floor would be primarily retail, with restaurants at either end on the Bay side. The second floor would be a mix of retail, restaurants and offices. The third floor and a new, partial fourth floor would be all offices. The Ferry Building galleria would be open to the outdoors at the central entrance and north and south facades, all at the ground level. The galleria would be an exhibition space for art shows and historical displays. An open air market proposed on part of the BART platform would include about 20 stalls, providing about 1,400 square feet of occupied retail space.

On the ground floor of the Agriculture Building, there would be a 12,000-square-foot food hall open at the north and south ends to connect with public outdoor spaces. On the second and third floors would be the 35,100-square-foot World Trade Club restaurant. A new, partial third floor would be constructed. Figure 9 (p. 20) shows floor plans and elevations for the Agriculture Building.

The Pier One shed, which now contains about 83,000 square feet of space used for parking would be demolished and replaced with a three-story building containing offices and a restaurant. In addition, the Pier One bulkhead would be rehabilitated to contain parking for about 375 cars on eight levels within the existing structure. Figure 5 (p. 16) includes an elevation for Pier One.

figure 2

EXISTING CONDITIONS
Site Plan



LEGEND

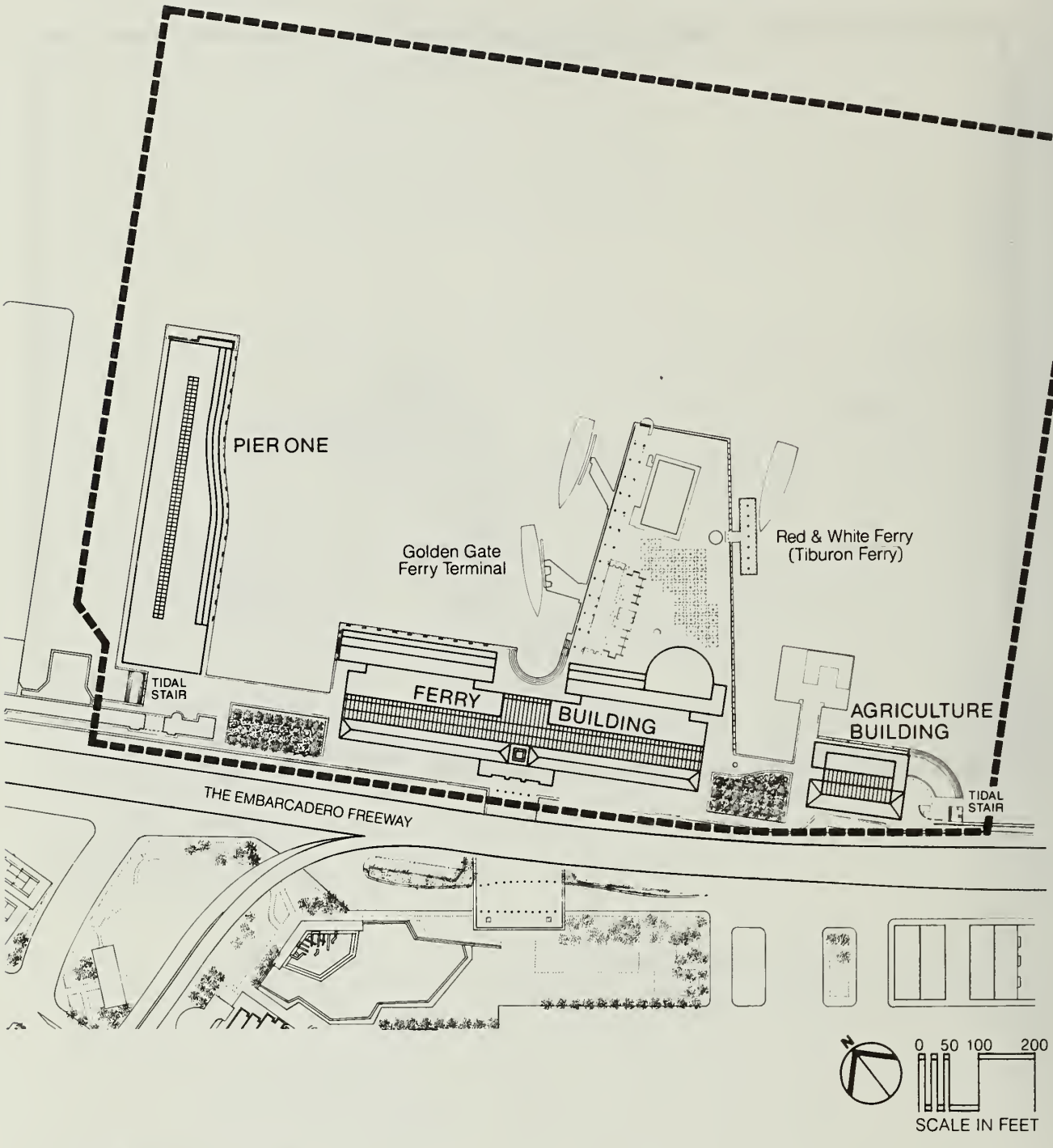
Buildings or deck area not included in the project

Buildings or structures included in the project

source: Planning Analysis & Development with information provided by Edward W. Baca, licensed land surveyor

figure 3

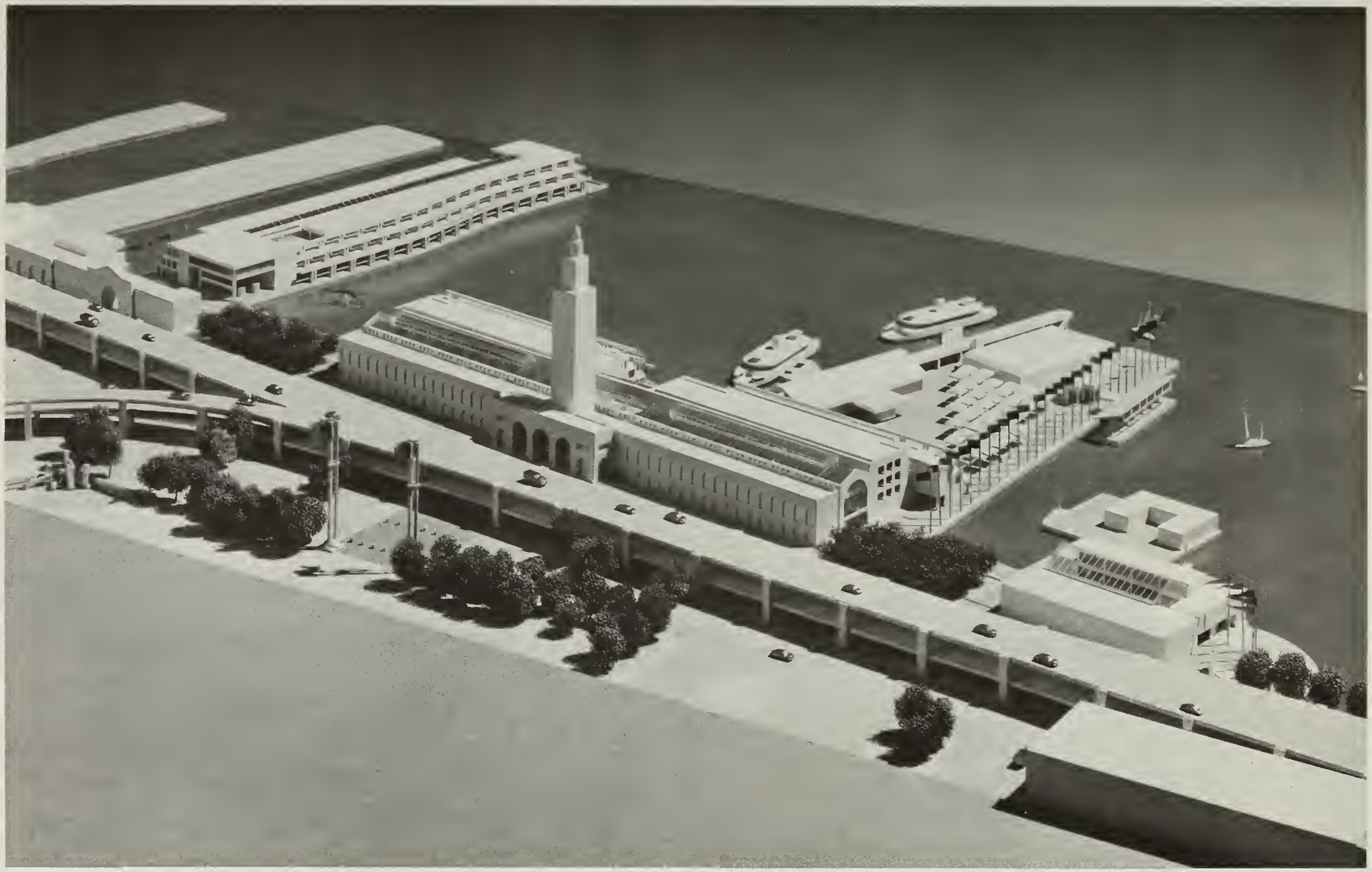
PROPOSED PROJECT
Site Plan



source: I.M. Pei & Partners, Architects

figure 4

MODEL PHOTOGRAPH
View Looking Northeast



source: Gerald Ratto, Photographer

WEST ELEVATIONS OF PROPOSED PROJECT/CITYSIDE



source: I.M. Pei & Partners, Architects

CURRENT PHOTOGRAPHS OF SITE/CITYSIDE



FERRY BUILDING



AGRICULTURE BUILDING

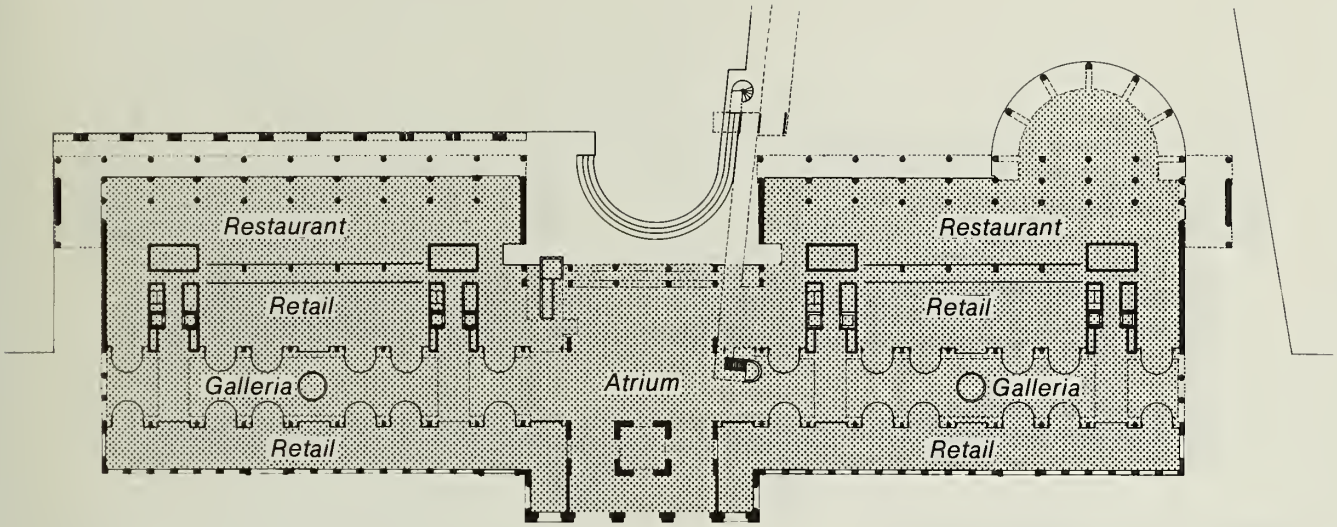


PIER 1

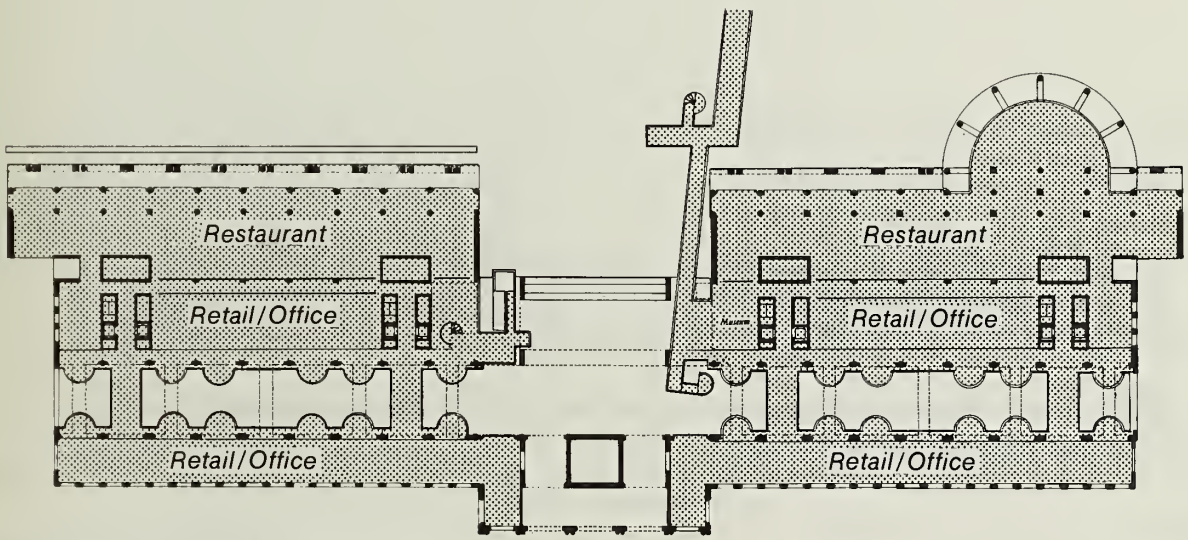
source: Planning Analysis & Development

figure 6

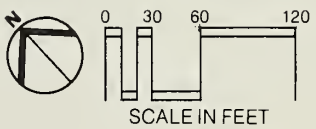
PROPOSED PROJECT
Ferry Building



ENTRY LEVEL FLOOR PLAN



SECOND LEVEL FLOOR PLAN

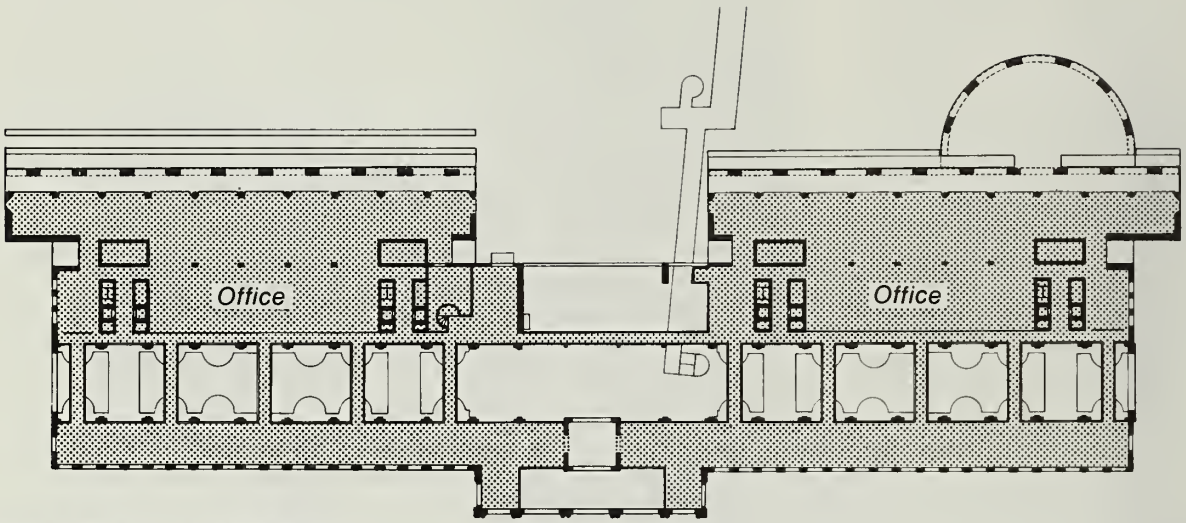


Unshaded area indicates that which is open to the roof

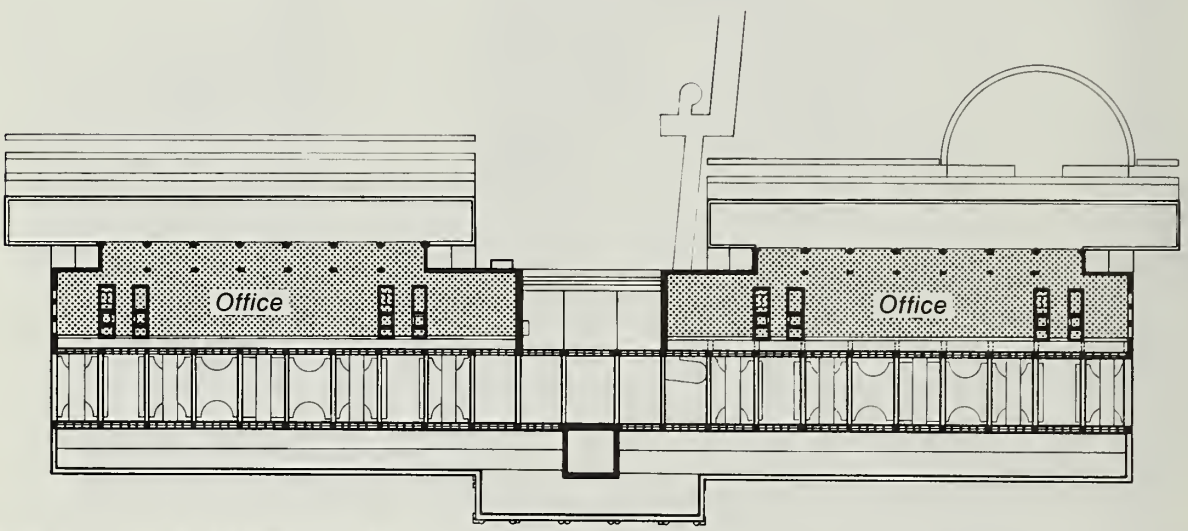
source: I.M. Pei & Partners, Architects

figure 7

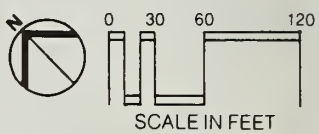
PROPOSED PROJECT
Ferry Building



THIRD LEVEL FLOOR PLAN



FOURTH LEVEL FLOOR PLAN

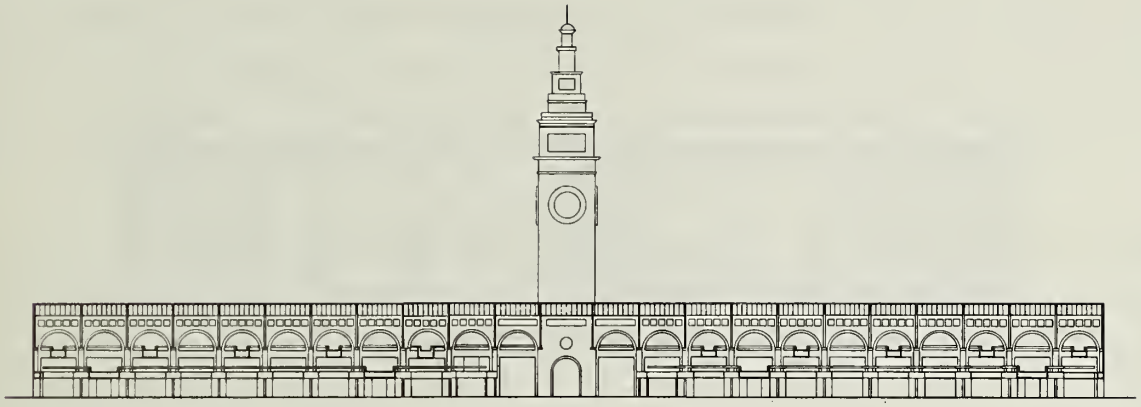


Unshaded area indicates that which is open to the roof

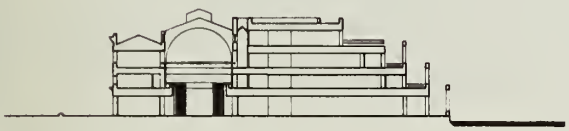
source: I.M. Pei & Partners, Architects

figure 8

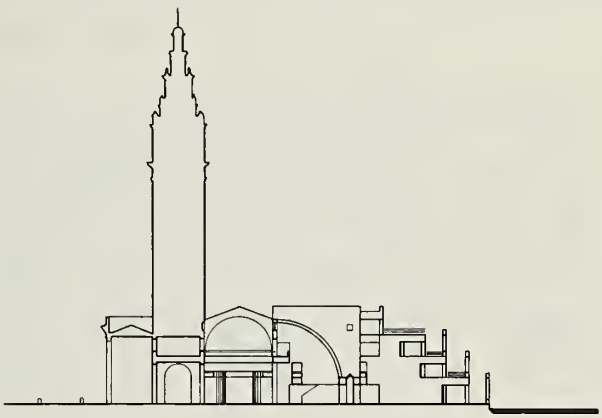
PROPOSED PROJECT
Ferry Building Sections



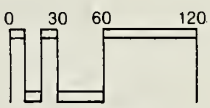
SECTION A-A′

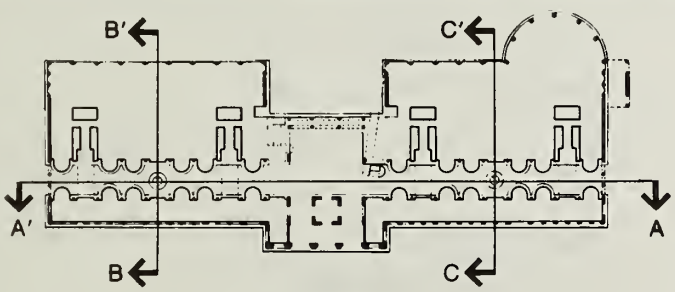


SECTION B-B′



SECTION C-C′





PLAN



source: I.M. Pei & Partners, Architects

figure 9

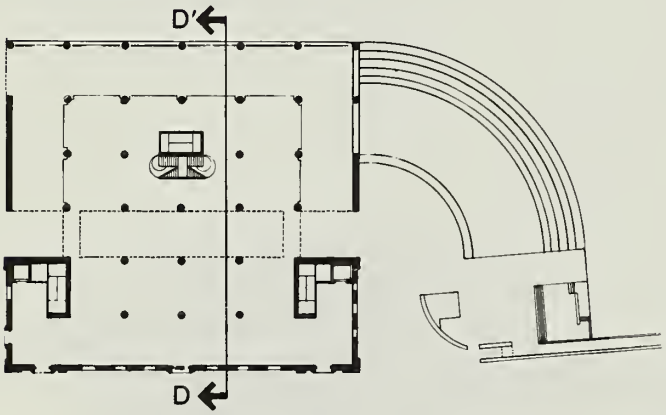
PROPOSED PROJECT
Agriculture Building Floor Plans and Section



WEST ELEVATION /CITYSIDE

scale: 1" = 35'

source: Charles Hall Page & Associates, Inc., Architecture & Urban Planning

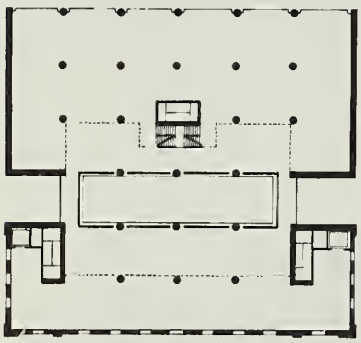


ENTRY LEVEL

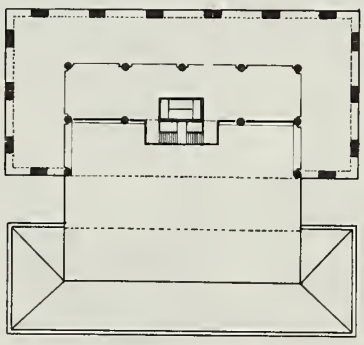


BUILDING SECTION D-D'

scale: 1" = 112'



SECOND LEVEL



THIRD LEVEL



source: I.M. Pei & Partners, Architects

Table 1 (p. 22) compares the existing land uses on the site to those proposed for the project. (These figures are occupied areas.) The site presently accommodates about 212,000 square feet of offices, including 13,000 square feet of unrented space. There would be an increase of about 96,000 square feet of office, 47,200 square feet of restaurant and 63,000 square feet of retail with the project.

Table 2 (p. 23) shows the existing land uses by building compared to the proposed land uses. (These figures are occupied areas.) The Ferry Building would have about 247,400 square feet of area, compared to about 230,300 square feet under existing conditions. The total area in the Agriculture Building would be increased to 47,100 square feet from 31,000 square feet. Pier One (including parking in the bulkhead building) would increase to 228,700 square feet from about 89,500 square feet.

Table 3 (p. 24) shows the building footprint area and gross area for each building under existing and proposed conditions. Due to building additions and new floors, the gross area of all buildings combined would be 609,300 square feet, or about 160,000 square feet more than with existing conditions. The Ferry Building would be increased by 27,000 square feet, the Agriculture Building by 24,600 square feet and Pier One by 108,700 square feet.

Figure 10 (p. 25) illustrates the changes in building coverage, and Figure 11 (p. 26) is a photograph of the project model as seen from the Bay Bridge.

The Ferry Building would undergo major restoration of the exterior (particularly the City side facade); other parts of the building would be a mix of new construction and rehabilitation. The City side facade of the Ferry Building would be restored. On the interior, a proposed galleria would recreate a sense of the original nave that ran the length of the building; skylights would be replaced, and the mosaic Great Seal of California would be preserved and relocated. The connection between The Embarcadero and ferry boats would be re-established through a new atrium and proposed grand staircase. A new, partial fourth floor would be constructed within the existing building envelope. The existing 56-foot height of the Ferry Building would be increased by four feet due to a proposed skylight.

Table 1

FERRY BUILDING COMPLEX: OCCUPIED AREA BY USE

(In Square Feet)

	Existing[1]	(%)	Proposed	(%)	Net Change
Office	212,000	(60)	308,000	(59)	96,000
Restaurant	1,800	(.5)	49,000	(9)	47,200
World Trade Club	22,000	(6)	35,100	(6)	13,100
Retail	3,000[2]	(1)	66,000	(13)	63,000
Museum/ Display	13,000[3]	(4)	--		-13,000
Storage	6,200[4]	(2)	--		-6,200
Outdoor	1,000[5]	(.5)	1,400	(1)	400
Parking	91,600	(26)	63,700	(12)	-27,900
Total	350,600[6]	(100)	523,200	(100)	172,600

Table Notes:

1. Areas are based on existing tenant leases with the Port.

2. Includes travel agencies.

3. Includes space occupied by the California Division of Mines and Geology.

4. Space rented out by Port as storage.

5. Florist kiosk under Ferry Building clock tower.

6. Does not include 13,000 square feet of vacant office space.

Source: Continental Development Corporation

Table 2

FERRY BUILDING COMPLEX

OCCUPIED AREA BY BUILDING, EXISTING AND PROPOSED

(In Square Feet)

	Ferry Building	Agriculture Building	Pier One	Total
	Existing/Proposed	Existing/Proposed	Existing/Proposed	Existing/Proposed
Office	176,000/147,000	31,000/ 0	5,000/161,000	212,000/308,000
Restaurant	500/ 33,000	0/12,000	1,300/ 4,000	1,800/ 49,000
World Trade Club	22,000/ 0	0/35,100	0/ 0	22,000/ 35,100
Retail	3,000/ 66,000	0/ 0	0/ 0	3,000/ 66,000
Museum/ Display	13,000/ 0	0/ 0	0/ 0	13,000/ 0
Storage	6,200/ 0	0/ 0	0/ 0	6,200/ 0
Outdoor	1,000/ 1,400[1]	0/ 0	0/ 0	1,000/ 1,400
Parking	8,600/ 0	0/ 0	83,200/ 63,700	91,600/ 63,700
Subtotal	230,300/247,400	31,000/47,100	89,500/228,700	350,800/523,200
Other	13,000[2]/ 0			
Total	**243,300/247,400**	**31,000/47,100**	**89,500/228,700**	**363,800/459,500**

Table Notes:

1. Open air market kiosks and stalls on the BART platform.

2. Vacant office space.

Source: Continental Development Corporation

Table 3

EXISTING AND PROPOSED FOOTPRINTS [1] AND GROSS AREA

(In Square Feet)

	Footprint Existing/Proposed	Gross Floor Area Existing/Proposed
Ferry Building	111,000[2]/122,400	323,000[3]/350,000[4]
Agriculture Building	22,300[5]/ 21,400	36,000/ 60,600[6]
Pier One	87,000/ 67,500	90,000[7]/198,700[8]
Subtotal	220,300/ 211,300	449,000/ 609,300
Other	1,400[9]/ 1,400[10]	1,400[9]/ 1,400[10]
Total	**221,700/ 212,700**	**450,400/ 610,700**

Table notes:

1. Footprint refers to total building area within the perimeter of ground floor exterior walls; it indicates the amount of building coverage on site.

2. Includes 3,000 square feet of boiler room and 550 square feet of bar north of the central entry pavilion.

3. On the existing three floors of the Ferry Building.

4. On three full floors and a new, partial fourth floor.

5. On existing two floors and mezzanine.

6. Includes a new, partial third floor.

7. Includes existing second floor of bulkhead building and mezzanine.

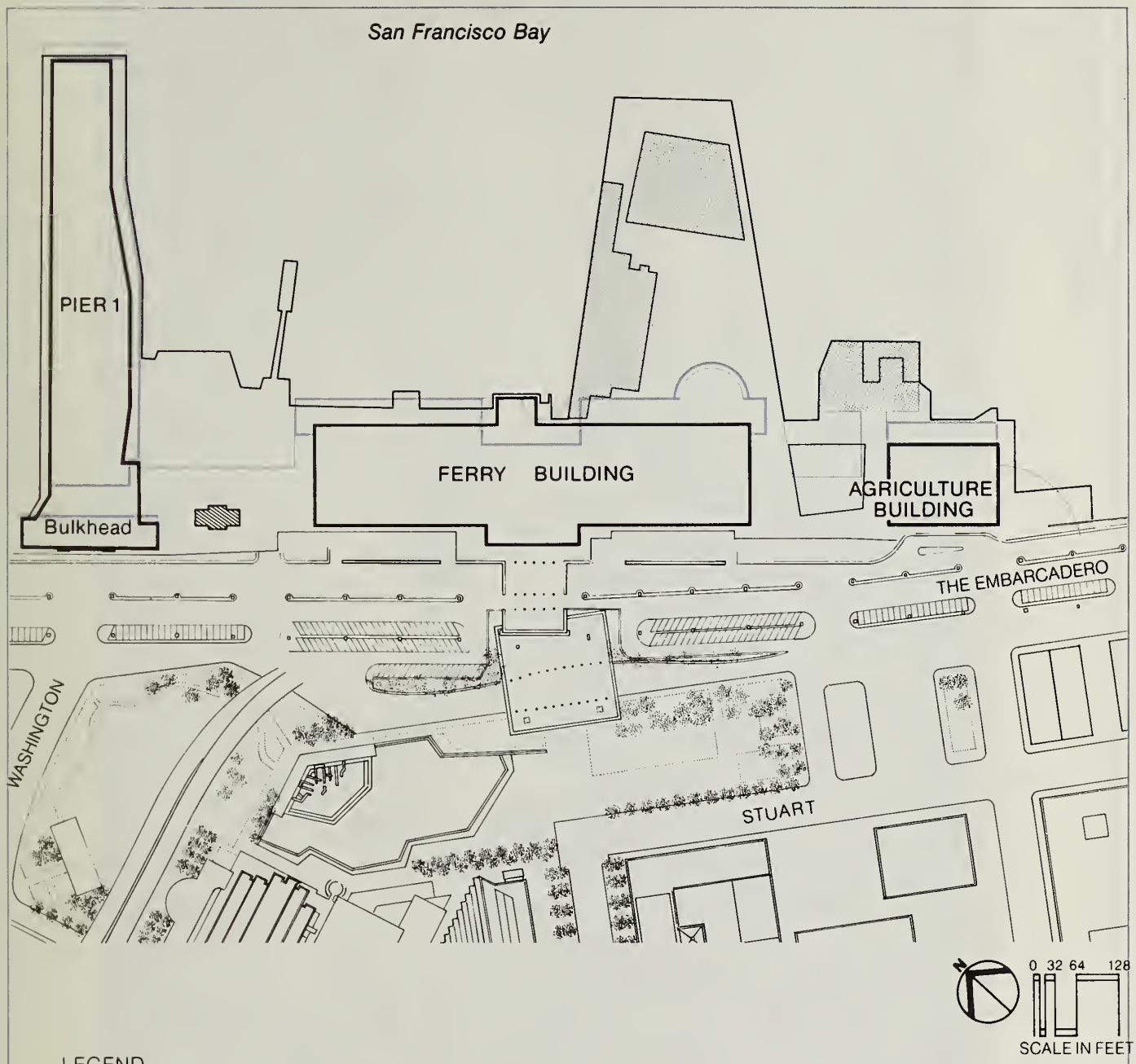
8. Includes three floors (two additional floors) in a new Pier One building.

9. Includes existing National Car Rental building.

10. Includes kiosks and stalls for open air market on BART platform.

Source: Continental Development Corporation

figure 10 EXISTING AND PROPOSED BUILDING COVERAGE



source: Planning Analysis & Development and I.M. Pei & Partners, Architects

figure 11

MODEL PHOTOGRAPH
View from Bay Bridge



source: Gerald Ratto, Photographer

The Bay side facade of the Ferry Building would have two new wings which would step down towards the water from a height of about 60 feet to 20 feet and would extend 30 feet north and south of the existing Ferry Building. Separating the two wings would be a plaza. The atrium would have a four-story faceted glass wall curving down to the plaza, providing light and transparency through the building as seen from The Embarcadero. A new, two-story, semi-circular restaurant would be constructed on the Bay side facade of the Ferry Building (See Figure 6, p. 17, and Figure 11, p. 26). Portions of the Bay side of the Ferry Building would be extended over the Bay, resulting in about 7,000 square feet of new platform fill on piles.

The Agriculture Building shown in Figures 9 and 11 (pp. 20 and 26) would be an international food hall similar to Boston's Quincy Market, including food stalls, a galleria open at either end to connect with public outdoor spaces, and public outdoor eating areas at the proposed tidal stairs adjacent to the Embarcadero Promenade. The two-story facades of the original 1915 portion of the Agriculture Building would be restored. The rear addition, constructed in 1918, would be demolished, and a new Bay side addition would be built, resulting in about 5,000 square feet of new platform fill on piles. The interior would be all new construction. A new, partial third floor would be built within the existing building envelope. The height of the Agriculture Building would be be increased from 42 feet to 56 feet with the addition of a 14-foot skylight. If the Agriculture Building could not be rehabilitated as proposed, an alternative restoration approach would be used. See Alternative B-2, pages 205-207, for a description of possible approaches.

Pier One, shown in Figure 11 (p.26), is proposed to be a world trade center and would consist of trade offices, maritime-related business, product display space, a telecommunications center, maritime archives, a library, and meeting and conference rooms. The bulkhead would be remodeled on the interior to accommodate a mechanical, electrically-powered auto-stacking parking system. The exterior would be modified for access to the garage, but would retain its main features such as the arch, pitched roof and overall configuration. The 30-foot-tall shed on Pier One would be demolished and replaced with a 40-foot-tall structure. Because of the permanent location of the Pacific Telephone vault on the end of the pier, it would be necessary to

extend Pier One about 15 feet to the east in order to accommodate pedestrians on the outer perimeter. About 4,000 square feet of new platform fill on piles would be added. Some existing platform fill would be repaired and some would be permanently removed.

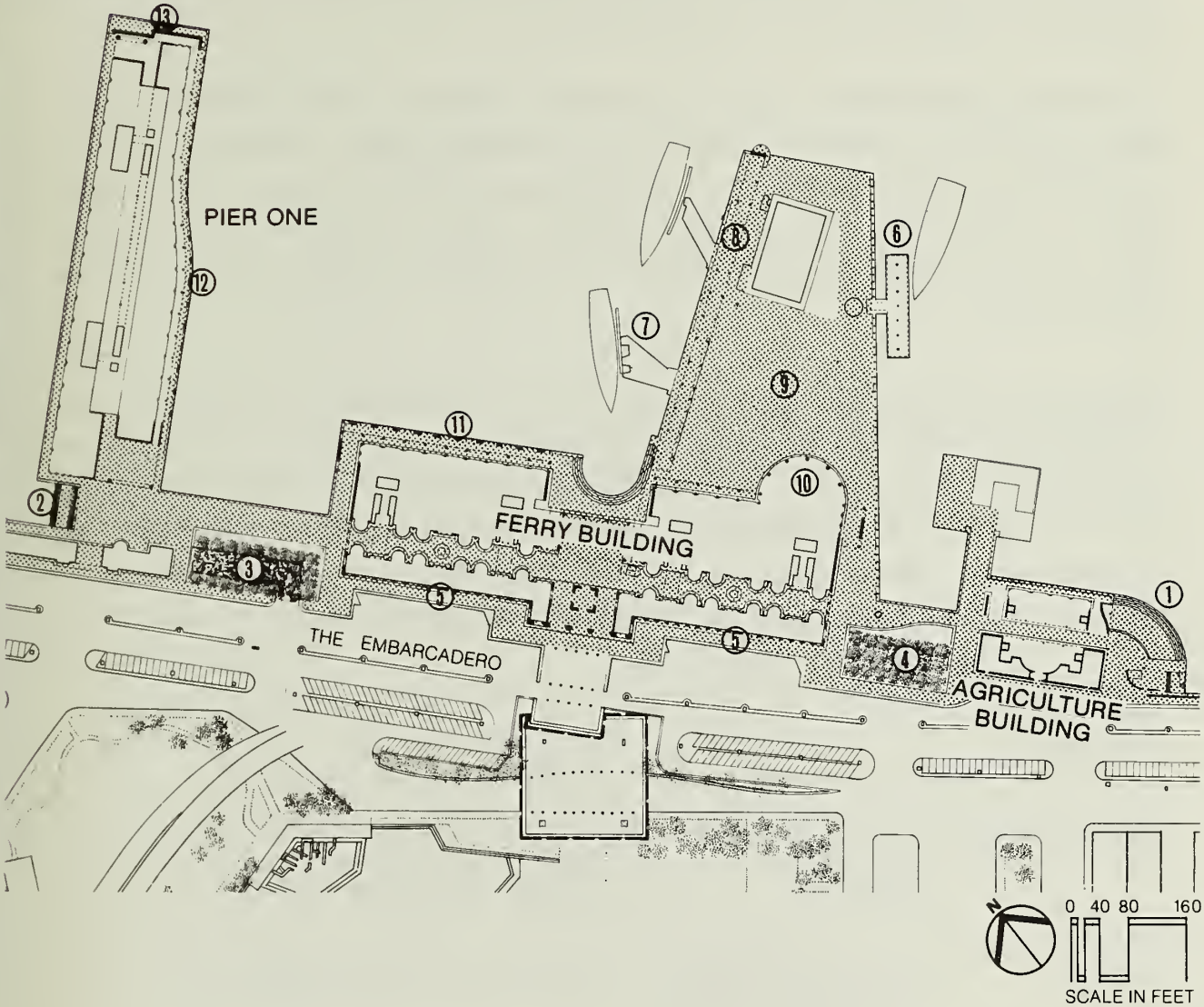
Open Space: The project would include removal and/or reconstruction of existing platform fill and would provide landscaping, paving, seating areas and other outdoor amenities. See Figure 12 (p. 29), which shows the location of public and private facilities. The numbers in parentheses in the text below are keyed to those in Figure 12.

There would be a continuous public walkway around and through the Ferry Building Complex and two sets of tidal stairs at the water, south of the Agriculture Building (1) and north of the Pier One plaza (2). Together, the Ferry Building complex and The Embarcadero Promenade would provide almost a mile of uninterrupted pedestrian access on walkways along the Bay.

There would be two public plazas north (3) and south (4) of the Ferry Building. The Red and White ferry slip would be relocated (5) to the south side of the BART platform to consolidate ferry activity. (This is not a public area.) A 30-foot-wide third plaza would be created along The Embarcadero by removal of two rows of parking spaces in front of the Ferry Building (6).

Continuous public access to the waterfront would be maintained at ground level around the southern and eastern perimeter of the BART platform. (Some of this open space was developed as part of project approval for the Bay Corporation restaurant.) The public pedestrian bridge over the Golden Gate Ferry terminal would be extended eastward to provide increased public access and viewing opportunities (7). This walkway would be accessible from the second-floor atrium in the Ferry Building. On the BART platform (8), an open-air market is proposed; the platform would also be used for public events, such as concerts and exhibits.

figure 12 OPEN SPACE



LEGEND

(1) Agriculture Building tidal stairs
(2) Pier One tidal stairs
(3) North public plaza
(4) South public plaza
(5) Central public plaza
(6) Red and White Ferry Slip*
(7) Golden Gate Ferry Slips*
(8) Public pedestrian bridge
(9) BART platform open space
(10) Semi-circular restaurant*
(11) Ferry Building pergola
(12) Pier One pergola
(13) Pier One restaurant and public open space

Publicly accessible pedestrian areas

* Areas not primarily public spaces although publicly accessible

Proposed plaza (not part of the project)

source: Planning Analysis & Development

Pedestrian access to the waterfront would continue around the BART platform to a pergola[3] on the northeast side of the Ferry Building (10). From here, pedestrians could walk to the north plaza (3).

Pedestrian access would continue along the perimeter of Pier One under another pergola (11); there would be a restaurant and public open space (12) at the east end. The walkway would continue around the north side of Pier One, where a few (no more than 20) pleasure craft would be moored on a short-term basis. Public spaces inside a galleria would contain displays associated with world trade.

Although the area under the freeway is not in the sponsor's leasehold, the architects propose removing about 30 parking spaces between the front of the central Ferry Building entrance and Embarcadero Plaza, in order to strengthen the connection to Market Street. A plaza is suggested for the area under the freeway (shown within the dashed line on Figure 12). As this land belongs to the Port and is outside the site boundaries, the plaza would have to be built by the Port or another public agency.

Footnotes:

1. Proposed gross square footages for the three project buildings:

Ferry Building:	retail/restaurant	112,200 gross square feet
	offfice	208,200 gross square feet
	galleria	29,600 gross square feet
Agriculture Building:	retail/restaurant (includes World Trade Club and galleria)	60,600 gross square feet
Pier One:	retail/restaurant	4,200 gross square feet
	office	181,000 gross square feet
	galleria	13,500 gross square feet

2. Platform fill refers to pile-supported decks over Bay waters.
3. A pergola is a frame that consists of columns and beams and is open to the sky. Such a frame is frequently used to train vines.

D. Project Schedule

Construction on Pier One and the Agriculture Building would begin first so that some Ferry Building tenants could relocate there temporarily. Ferry Building work would be last, in order to put off relocation as long as possible for the majority of businesses occupying the building, and would probably begin about 12 months after the start of Pier One construction. Because the timing of permits and approvals is subject to change, no specific construction dates can be given, although the sponsor expects work to commence by October 1983. Construction would take about 16 months for Pier One; 12 months for the Agriculture Building; and about 30 months for the Ferry Building. The total construction period would be three and a half years, and would conclude approximately in 1987. However, Pier One and the Agriculture Building could be occupied during late 1984 or early 1985. Site improvements, such as sidewalks, paving, landscaping and street furniture would be installed throughout the construction period to serve each area of the site as developed.

E. Project Cost

Construction costs are estimated at $105 million in 1982 dollars. In addition, architectural and engineering costs are estimated at $7.1 million. The average annual rents would vary by use. For offices, rent would be about $35 per square foot; for retail, about $40 per square foot; and for restaurants, about $28 per square foot, all in 1982 dollars. Since financing has not been determined, exact financing costs cannot be given. However, the project sponsor estimates that total costs, including financing, would be approximately $180 million. [1]

Footnote:

1. Allerton Blake, Projects Development Manager,Continental Development Corporation, telephone conversation, August 13, 1982.

F. Required Project Approvals

The following discussion identifies necessary approvals and permits in the order they would be obtained by the sponsor.

Port Commission: The site would be developed under the terms of the Development and Disposition Agreement (the agreement) between the developer and the

Port and City of San Francisco. The agreement specifies four phases in the development process by which various actions must be completed and presented to the Port Commission for approval: preliminary design and cost studies, completed December 9, 1981; design development and refined cost estimates, to be completed by March 1, 1983; financial investment analysis and final working and construction drawings, to be completed by September 1, 1983; and leasing, marketing, merchandising and management programs, to be completed by July 1, 1983. Each phase must be approved by the Port Commission, as well as any deviation or modification of the terms and/or timing.

The agreement specifies land uses for the Ferry Building Complex as a whole.[1] Originally, the agreement called for one-third retail/restaurant and two-thirds office use in the Ferry Building alone. At the request of the project sponsor, this allocation would apply to the project as a whole, with retail and restaurant limited to 115,000 square feet (excluding the World Trade Club, which is considered a private rather than a public use).[2] In addition, the use stipulated for the Agriculture Building was changed from office to retail/restaurant and office.

The agreement includes interim and later uses for Pier One. Interim uses as specified in the original agreement included retail and restaurants in the bulkhead building and parking for 400 cars on two levels in the existing shed. These uses were subject to later conversion to office, retail and restaurants, if the Port and sponsor jointly determined that an acceptable alternate parking site was available within 1,500 feet of the site, or that no such alternate parking was required. The proposed plan for Pier One required a change in the agreement (approved by the Port Commission in December 1981)[3] as permanent parking is proposed for the bulkhead building, and offices, support facilities for a world trade center and a restaurant are proposed for a new superstructure that would replace the shed.

The agreement between the sponsor and the Port also specifies that the project include site improvements such as landscaping, plazas, and public and retail spaces to integrate the site with the waterfront and Market Street. The Port has the authority to issue building permits for construction on Port property, including the Ferry Building Complex site. Prior to commencement of

construction, the Port would execute a 65-year lease with the project sponsor; the terms of this lease have been specified in the agreement.

San Francisco City Planning Commission: The City Planning Commission is responsible for certifying the project's compliance with the California Environmental Quality Act (CEQA), the Northeastern Waterfront Plan (adopted as part of the Comprehensive Plan), the Total Design Plan (endorsed by the Commission in 1980), and with the City Planning Code. The Commission would have to approve amendments to the Northeast Waterfront Plan to allow: removal of the Pier One shed; 15,000 more square feet of office and 11,000 less square feet of commercial recreation on Pier One than specified in the plan; permanent parking in the bulkhead building; retail and restaurant use instead of offices in the Agriculture Building; and construction of the proposed tidal stairs south of the Agriculture Building instead of the 50,000 square foot plaza east of that building specified in the plan. The differences between the proposed project and these plans are described more thoroughly in the Environmental Impacts and Alternatives chapters of this EIR. The City Planning Commission would take action on these amendments according to Master Plan amendment procedures, including a public hearing subsequent to certification of this EIR. The project must conform to the plan, as determined by the City Planning Commission, before project approval.

A Conditional Use (CU) authorization would be required to allow non-maritime uses on the site. While considering the CU application, the Planning Commission has the authority to determine an appropriate amount of parking, according to Sections 240.1(c) and 161 of the Planning Code. The site is in the Northern Waterfront Special Use District Number 1, in which parking is discouraged. The Conditional Use authorization would include a public hearing subsequent to Commission certification of this EIR. A Variance would be required according to Section 152 of the Planning Codeto allow the proposed service/delivery loading plan, because off-street loading requirements would not be met. The Zoning Administrator would approve or deny the Variance after a public hearing.

The Planning Commission also must approve a Certificate of Appropriateness for changes to a designated City landmark, based on the recommendation of the Landmarks Preservation Advisory Board (see below). Approval could be included as part of the Conditional Use authorization process after certification of this EIR.

As the Ferry Building is designated a City landmark, any changes to the structure would require a Certificate of Appropriateness from the City's Landmarks Preservation Advisory Board. Such changes would include removal of modern elements, such as air conditioners, and alterations to the Bay side facade. The LPAB would initiate proceedings and make recommendations to the Planning Commission regarding the required Certificate of Appropriateness. After considering the LPAB's recommendations, the City Planning Commission would grant or withhold the Certificate of Appropriateness.

The City Planning Commission would need to certify the EIR, grant the Conditional Use authorization, approve amendments to the Comprehensive Plan and approve the project before the project sponsor could apply for permit approvals from other agencies.

Bay Conservation and Development Commission (BCDC): This state agency has permit approval jurisdiction over the entire project, as the site is on the Bay and within the 100 foot shoreline band regulated by BCDC. The agency's permit powers govern land use, removal and replacement of fill, structural design for safety of fill, public access to the waterfront and architectural design review. BCDC would approve or disapprove a permit application by the sponsor after the EIR is certified and necessary City approvals granted.

BCDC's Design Review and Engineering Criteria Review Boards would review and advise the Bay Commission on preliminary and final design plans. The Design Review Board has met once with the project sponsor (January 1982).

BCDC must approve plan amendments to the Special Area Plan No. 1 of the Bay Plan, related to the portions of the project which would require changes in the Total Design Plan, before it can approve the project. Approval of both plan amendments and the project would occur after BCDC public hearings.

San Francisco Art Commission: The Art Commission has jurisdiction over changes to public buildings and other public property. The design review committee of this Commission is concerned with all aspects of architecture and urban design, and reviews all stages of the design process from conceptual design through working drawings. An art enrichment program would not be required for project approval.[4]

State Historic Preservation Office: To qualify for tax benefits for preservation of historic structures, the project sponsor would fill out the U.S. National Park Service's (Department of the Interior) Historic Preservation Certification Application. The application would be filed with the California State Historic Preservation Office (SHPO), which would act as the lead agency. SHPO would monitor proposed plans for the Ferry and Agriculture Buildings, from schematics through working drawings. The state agency would examine the project upon completion to evaluate preservation work and determine whether the project would qualify for tax benefits. SHPO would recommend to the U.S. Park Service and Internal Revenue Service whether to grant or refuse tax benefits. Final determination would be by the Internal Revenue Service, based upon the recommendations of SHPO and the Secretary of Interior.

U.S. Army Corps of Engineers: The project would require the approval of the U.S. Army Corps of Engineers (Corps of Engineers) under Section 404 of the Federal Clean Water Act and Section 10 of the Federal Rivers and Harbors Act, for any new structures, excavation and dredge disposal into the waters of the United States. Construction work within existing pier lines would require only structural review by the Corps of Engineers. New construction would include the tidal stairs and relocation of the Red and White ferry slip. All other work, including dredging, would be within the perimeter of existing decks and piers, and thus would be outside the Corps' jurisdiction, as such areas are considered non-navigable waters.[5]

Through the Corps of Engineers permit and review processes, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service would review project plans. The California Regional

Water Quality Control Board, San Francisco Bay Region, and the California Department of Fish and Game are also advised of permit applications by the Corps of Engineers.

California Department of Transportation: Caltrans must issue an encroachment permit should any construction activity for the Ferry Building affect a state highway facility or right-of-way. This would include any activity affecting the footings supporting The Embarcadero freeway and the land around the footings, but not The Embarcadero roadway.[6]

Figure 13 (p. 37) shows the timing of permits and approvals from the various public agencies. Pages 86 to 94 of this report, Environmental Impacts, include a discussion of the plan amendments that would be required prior to project approval.

Footnotes:

1. Development and Disposition Agreement for the Ferry Building Complex, between the City and County of San Francisco, operating by and through the San Francisco Port Commission, and Continental Development Corporation, April 9, 1980, Article 3, Section 3.01 (a)(1).

2. San Francisco Port Commission Resolution No. 82-57, May 12,1982.

3. Ibid.

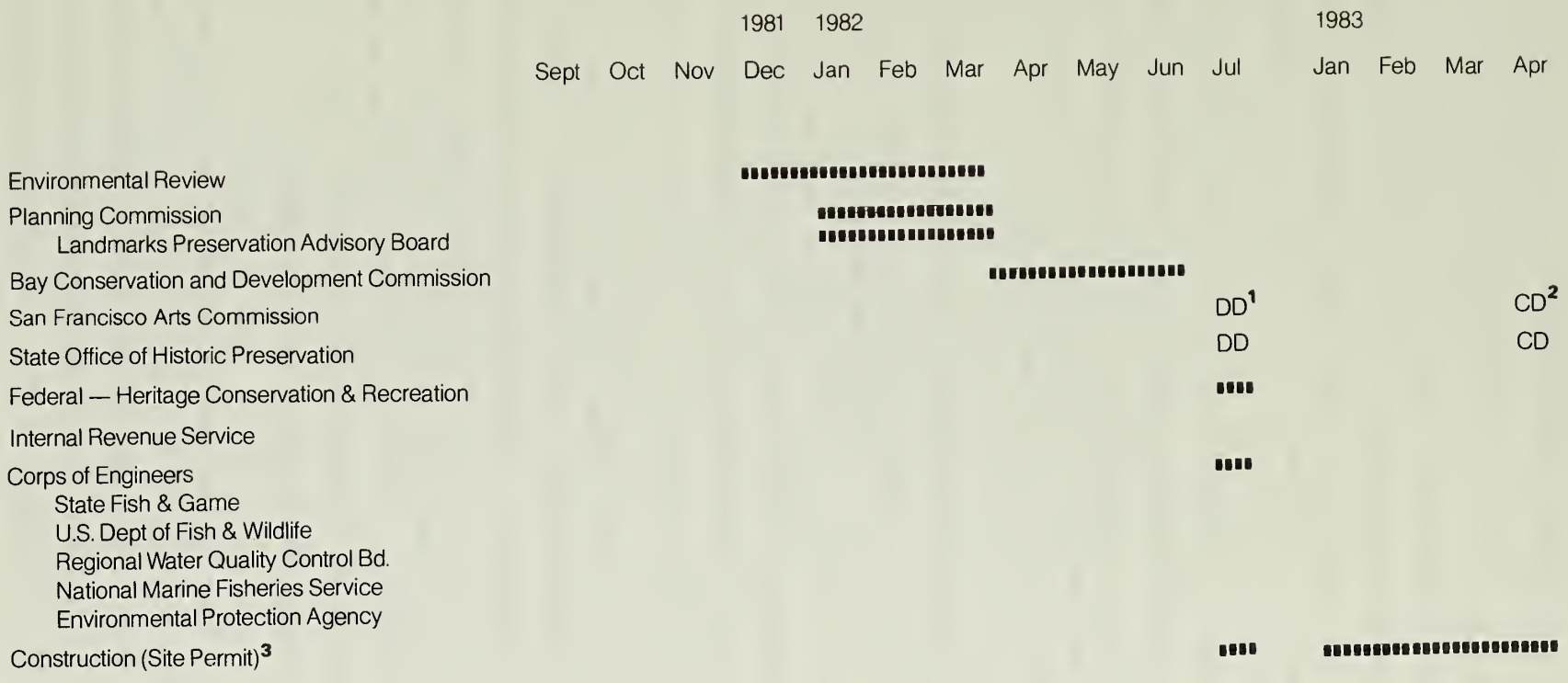
4. Dmitri Vedensky, AIA, Chairman of the Civic Design Committee, San Francisco Art Commission, telephone conversation, August 25, 1982.

5. Tom Wakeman, Corps of Engineers, Regulatory Functions, discussion, July 7, 1981, and United States Code Annotated, Title 33, Navigation and Navigable Waters, Sections 1 to 350, Waters Declared Non-navigable: Change of Name, Section 59h, North Embarcadero Area, San Francisco, California.

6. Robert Cashion, Caltrans Senior Permit Engineer, telephone conversation, March 17, 1982.

figure 13

APPROVAL SCHEDULE



[1] DD — Design Development

[2] CD — Construction Documents

[3] Since phased construction (fast-tracking) would be used, the building permits would be issued over an extended period of time, about ten months.

source: Planning Analysis & Development

III. ENVIRONMENTAL SETTING

A. Land Use Plans and Policies

Land Use Plans: The decline of break-bulk maritime activity resulted in less shipping in the Northeastern Waterfront area in the 1960s. In 1969 the Northern Waterfront Element was adopted as part of the San Francisco Comprehensive Plan.[1] The purpose of the element was to "guide future development in all areas on and contiguous to the harbor in a manner consistent with the interests of San Francisco."[2] In the same year, the Port of San Francisco and its properties were transferred from State to City jurisdiction. Also in 1969, the San Francisco Bay Plan, prepared by the four-year old Bay Conservation and Development Commission (BCDC), a state agency, received legislative approval through an amendment to the scAteer-Petris Act.

The McAteer-Petris Act (the Act) and the Bay Plan regulate Bay fill [3] and require "maximum feasible public access along the shoreline."[4] Under the Act, BCDC may permit Bay fill only for certain "water-oriented uses," including water-related industry, bridges, wildlife refuges, and water-oriented recreation and public assembly. Housing and offices, two uses for which large areas of the Bay were filled in the past, are not permitted on new fill, including replacement piers.

In the 1970's, two private development plans for the site area were proposed for a combined total of 3 million square feet of office space, 650,000 square feet of commercial use, 2,200 hotel rooms, parking, and a new ship terminal. The proposed Ferry Port Plaza north of the Ferry Building would have included 18 acres of fill, while the proposed U.S. Steel project south of the Ferry Building would have included fill extending from the Bay Bridge to Howard Street and 1,000 feet into the Bay.[5] These projects led to a legal determination that offices and housing are not water-related uses.[6]

Adverse public reaction to these two proposals resulted in the development of the Special Area Plan No. 1 for the San Francisco Waterfront. The Special Area Plan was adopted as part of the Bay Plan by BCDC in 1975. The Special Area Plan was the result of the work of the Waterfront Advisory Committee established by the Board of Supervisors in 1973. The committee consisted of

representatives from citizens' groups, the Department of City Planning, the San Francisco Redevelopment Agency, the Port of San Francisco, and BCDC. The Special Area Plan established allowable fill, dredge, and land use policies regarding development along the shoreline from the Hyde Street Pier to India Basin. It called for detailed planning (the Total Design Plan) in the "Ferry Building Area" (Piers 7-24), and BCDC subsequently imposed a moratorium on fill in that area (including the site) until planning was completed.

Upon adoption of the Special Area Plan, the Northern Waterfront Element of the Comprehensive Plan, state law, and BCDC policies became inconsistent. To bring the Northern Waterfront Element and the Special Area Plan into conformity with each other, the Northeastern Waterfront Plan was adopted in 1977 as part of the Comprehensive Plan.[7] This plan, as amended in 1980, reflects objectives and policies of the concerned public agencies and supersedes the Northern Waterfront Element. The Northeastern Waterfront Plan designates five site-specific planning areas, from Van Ness Avenue to Third Street, including the Ferry Building Area.

In February 1977, to advance plans towards implementation, the San Francisco Board of Supervisors called for a survey of the Northeast Waterfront to determine the feasibility of redevelopment. The resulting Northeastern Waterfront Survey (NEWS) Technical Report, completed in August 1979, was a joint undertaking of the Department of City Planning, the Redevelopment Agency and the Port of San Francisco in conjunction with the Northeastern Waterfront Advisory Committee (NEWAC), which was created to provide citizen review and comment. In accordance with recommendations in that report and requirements in BCDC's Special Area Plan, the Total Design Plan was then developed for the waterfront area between Broadway and the Bay Bridge (Piers 7-24). The Total Design Plan was developed as a specific plan to amplify the Special Area Plan and the Northeastern Waterfront Plan and considered the balance and intensity of uses throughout the San Francisco waterfront. The Total Design Plan was approved by the Port Commission (Resolution 80-4, January 9, 1980), endorsed by the City Planning Commission (as modified by City Planning Memorandum of January 31, 1980, Resolution 8482), and approved by BCDC with modifications on June 5, 1980 (Resolution 80-1). The Total Design Plan is a synthesis of the objectives and policies of the Special Area

Plan and the Northeastern Waterfront Plan and includes site-specific land use, transportation and urban design guidelines for the project site.

The City Planning Code designates the Ferry Building area north of the Bay Bridge as Special Use District No. 1, Northern Waterfront, in which all uses other than maritime are conditional.

The Maritime Strategy, issued by the Port of San Francisco in 1979, describes the Port's plans and policies for 7.3 miles of waterfront property within its jurisdiction. The report describes the Port's strategy of optimizing real estate development at the northern waterfront, consistent with BCDC's Special Area Plan, the Total Design Plan and the Northeastern Waterfront Plan. The Maritime Strategy also identifies goals and objectives for the Port's overall development. Objectives for commercial development in the site area include approving the Total Design Plan (implemented), authorizing a development and disposition agreement for restoration of the Ferry Building and realigning The Embarcadero toward Steuart Street.

Transportation plans for the site vicinity include Caltran's project to remove The Embarcadero Freeway (currently the subject of a combined EIR/EIS); the Department of Public Work's plans to realign and improve The Embarcadero roadway; and Muni's plan to run a streetcar line along The Embarcadero. These plans are discussed in detail in Environmental Impacts, pp. 150-151.

Land Use Policy: Recommended land uses for the project area according to the Northeastern Waterfront Plan and the Site Specific Guidelines of the Total Design Plan are as follows:

> Ferry Building: Predominantly commercial/recreation (shops and restaurants) on the ground floor; predominantly offices on the second floor; predominantly offices and the existing restaurant (World Trade Club) on the third floor; a 30,000-square-foot plaza north of the Ferry Building; a 4,000-6,000-square-foot arcade between the Ferry Building and Pier One.
>
> Agriculture Building: 12,000-15,000 square feet of office space; 2,000 square feet of visitor center; a 50,000-square-foot public plaza behind the Agriculture Building.

Pier One: Up to 160,000 square feet of office, including up to 15,000 square feet of commercial recreation and/or community facilities; no less than 26,000 square feet of public access perimeter aprons.

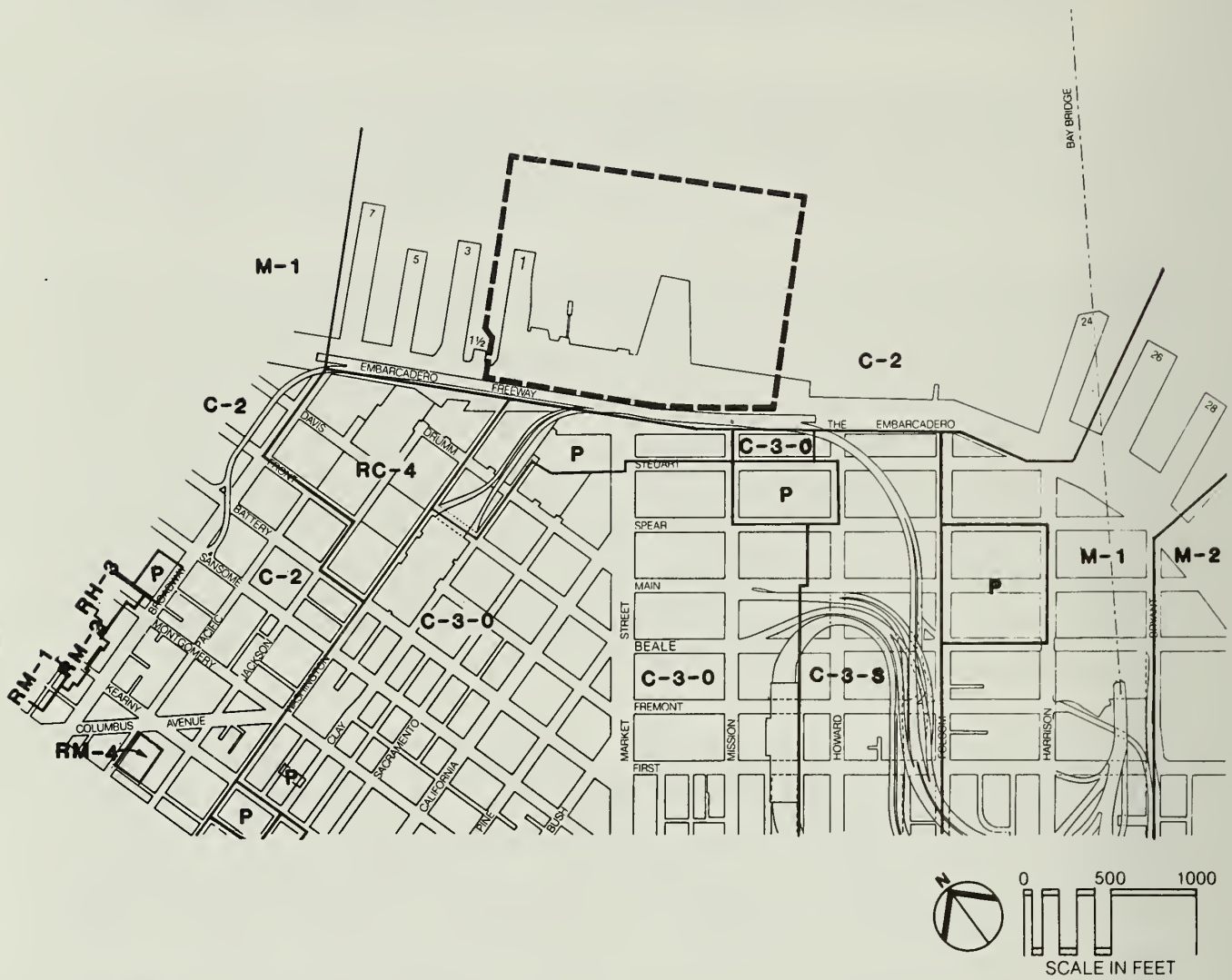
Short-term parking could be allowed on Pier One as an interim use with some office allowed within the existing shed. BCDC's Special Area Plan allows hotel/boatel use as well as small-scale offices and studios on existing piers in the site area. Offices and residential uses are not permitted on new fill (including replacement piers).

Zoning: Zoning for the site and surrounding area is shown in Figure 14 (p. 42). The site is zoned C-2 (Community Business) and is adjacent to a Public Use (P) district west of the freeway between Mission and Washington Streets, which is zoned for open space. Uses in this P district include Justin Hermann Plaza and Park. The Agriculture Building is opposite the downtown C-3-O District (Downtown Office), which allows the most intensive land use in the City. Pier One is opposite an RC-4 District (Residential, Commercial Combined, High Density). The site is in the Northern Waterfront Special Use District No. 1, where water-borne commerce and navigation and related activities are permitted as principal uses.

Height and bulk districts in the site area are shown in Figure 15 (p. 43). The site spans two height and bulk districts. The Ferry and Agriculture Buildings are zoned 84-J, which allows buildings up to 84 feet high and restricts bulk over 40 feet in height to a maximum plan length of 250 feet and a maximum diagonal dimension of 300 feet. Pier One is in an 84-X-1 district, which allows buildings up to 84 feet high with no bulk restrictions. The Northeastern Waterfront Plan and the Total Design Plan recommend a 40-X height and bulk designation for the site area, which would allow buildings to be 40 feet high with no bulk restrictions.

The maximum height of the Ferry Building is 56 feet except for the 235-foot clock tower. The maximum height of Pier One is 56 feet at the bulkhead building, and 30 feet at the pier shed. The maximum height of the Agriculture Building is 42 feet.

figure 14 ZONING MAP

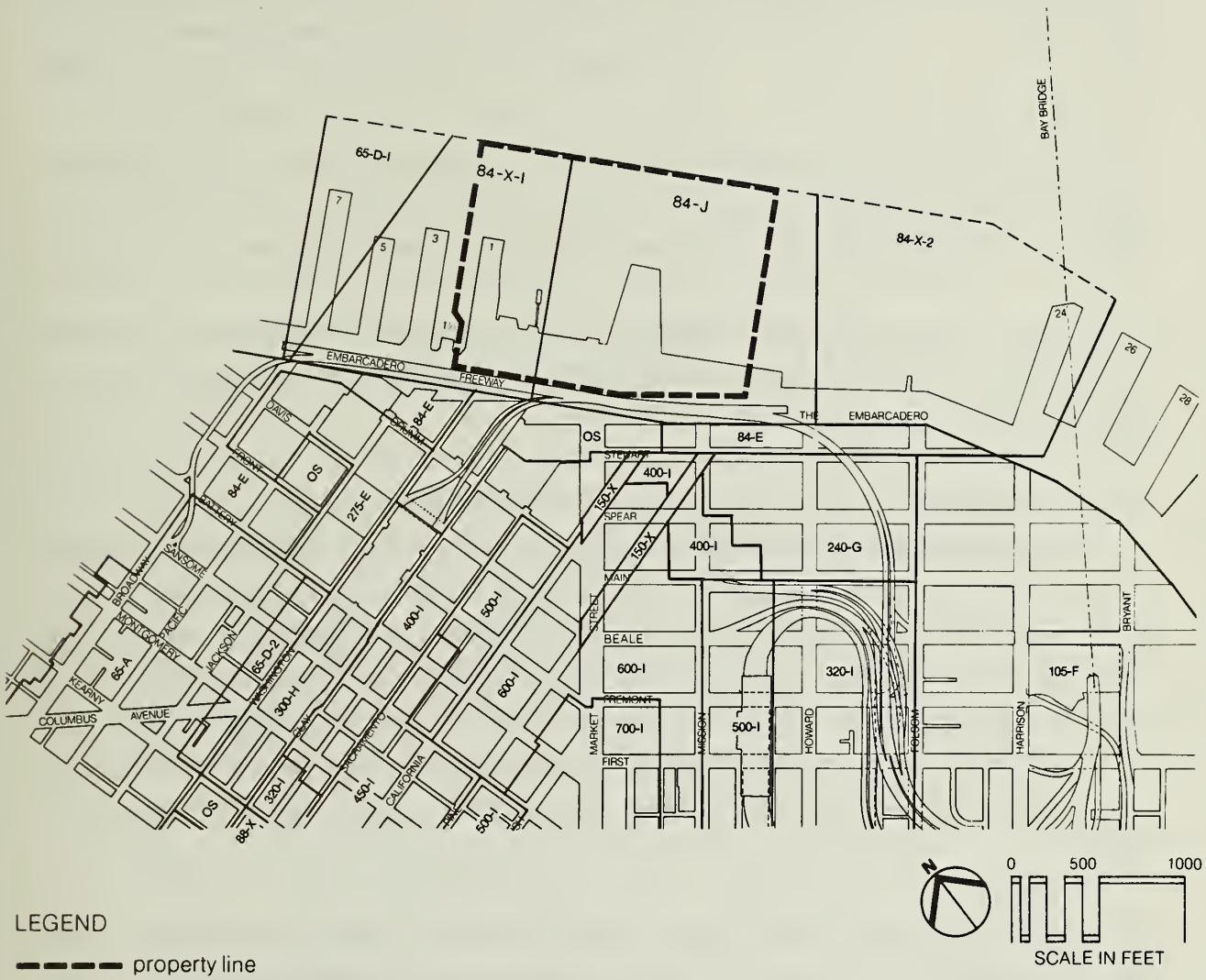


LEGEND

RM-1	Residential, Mixed, Low-Density District; one dwelling unit per 800 sq. ft. of lot area
RM-2	Residential, Mixed, Moderate-Density District; one dwelling unit per 600 sq. ft. of lot area
RM-4	Residential, Mixed, High-Density District; one dwelling per 200 sq. ft. of lot area
RC-4	Residential–Commercial Combined, High-Density District; one dwelling per 200 sq. ft. of lot area
RH-3	Residential–House District; three Family
P	Public Use District
C-2	Community Business District
C-3-O	Downtown Office District
C-3-S	Downtown Support District
M-1	Light Industrial District
M-2	Heavy Industrial District
▬▬▬	Property line

source: Planning Analysis & Development and the San Francisco Planning Code

figure 15 HEIGHT AND BULK DISTRICTS



LEGEND

property line

Buik Limits

District Symbol on Zoning Map	Height Above Which Maximum Dimensions Apply (in feet)	Maximum Plan Dimensions (in feet) Length	Diagonal Dimension
A	40	110	125
B	50	110	125
C	80	110	125
D	40	110	140
E	65	110	140
F	80	110	140
G	80	170	200
H	100	170	200
I	150	170	200
J	40	250	300
K	60	250	300
L	80	250	300
M	100	250	300
OS	See Section 290.		
X	This table not applicable. But see Section 260(a)3.		

source: Planning Analysis & Development and the San Francisco Planning Code

Existing Land Use: The buildings that make up the Ferry Building Complex are presently used for offices, three restaurants, a bar, retail, and museum display space. In the Ferry Building, there are about 70 small-space tenants and five large-space tenants. The latter include the World Trade Club restaurant, Limbach, Limbach & Sutton law offices, California Canners and Growers, the Port of San Francisco, and the State of California Division of Mines and Geology (including a geology musuem). Tables 1 and 2 (pp. 22-23) summarize existing land uses by square footage in each building.

The Agriculture Building is occupied by private offices, Port of San Francisco facilities (the fire marshal's office and a laboratory), and the Crawford Nautical School.

Pier One contains long-term parking for about 230 cars. An additional 112 long-term and 66 short-term parking spaces are located on the site, or 408 total spaces. All of the parking spaces are controlled by the Port of San Francisco. Ferry service to Larkspur and Sausalito departs from the San Francisco ferry terminal of the Golden Gate Bridge Highway and Transportation District (GGBHTD), located on the BART platform on site. GGBHTD ferries are frequently moored on the north side of Pier One when not in use. The privately-owned Red and White ferry uses a slip south of Pier One for service to Tiburon.

The BART platform was built to provide access to a ventilation shaft for the BART tube which runs beneath the Ferry Building. A ventilation structure extends up from the tube at the east end of the platform. In 1972, the Port leased 34,000 square feet over and around the ventilation shaft for construction of a restaurant. An 8,200-square-foot restaurant was completed in August 1982 by the Bay Corporation. East of the Agriculture Building is Sinbad's restaurant, sited on what was originally the construction staging platform for the BART tube.

The Embarcadero Freeway lies directly west of the site, with the Washington and Clay Street ramps about three blocks to the northwest. Between the north and south directional lanes of The Embarcadero roadway are the Belt Line tracks and three rows of parking which accommodate about 160 cars. West of

the freeway are Embarcadero Plaza, the Hyatt Regency Hotel, The Embarcadero Center, and the One Market Plaza building. The Embarcadero Center occupies part of a Redevelopment Agency project area, which includes, altogether, four office highrises, retail and hotel uses.

Southeast of the site, and west of The Embarcadero, are the Muni bus turnaround and the Rincon Point sub-area of the Rincon Point-South Beach Redevelopment Project. The Muni turnaround is across The Embarcadero from the Agriculture Building. The redevelopment area is generally bounded by Mission, Harrison, and Spear Streets and by the waterfront from Pier 24 to the southern boundary line of the site. Future land uses according to the Redevelopment Plan for the area include: adaptive reuse of the Rincon Annex Post Office for commercial facilities; a 400-800 room hotel or, as an alternate, housing at an average density of 150 to 300 units per acre; and a major recreational park along the waterfront west of The Embarcadero Promenade.[8]

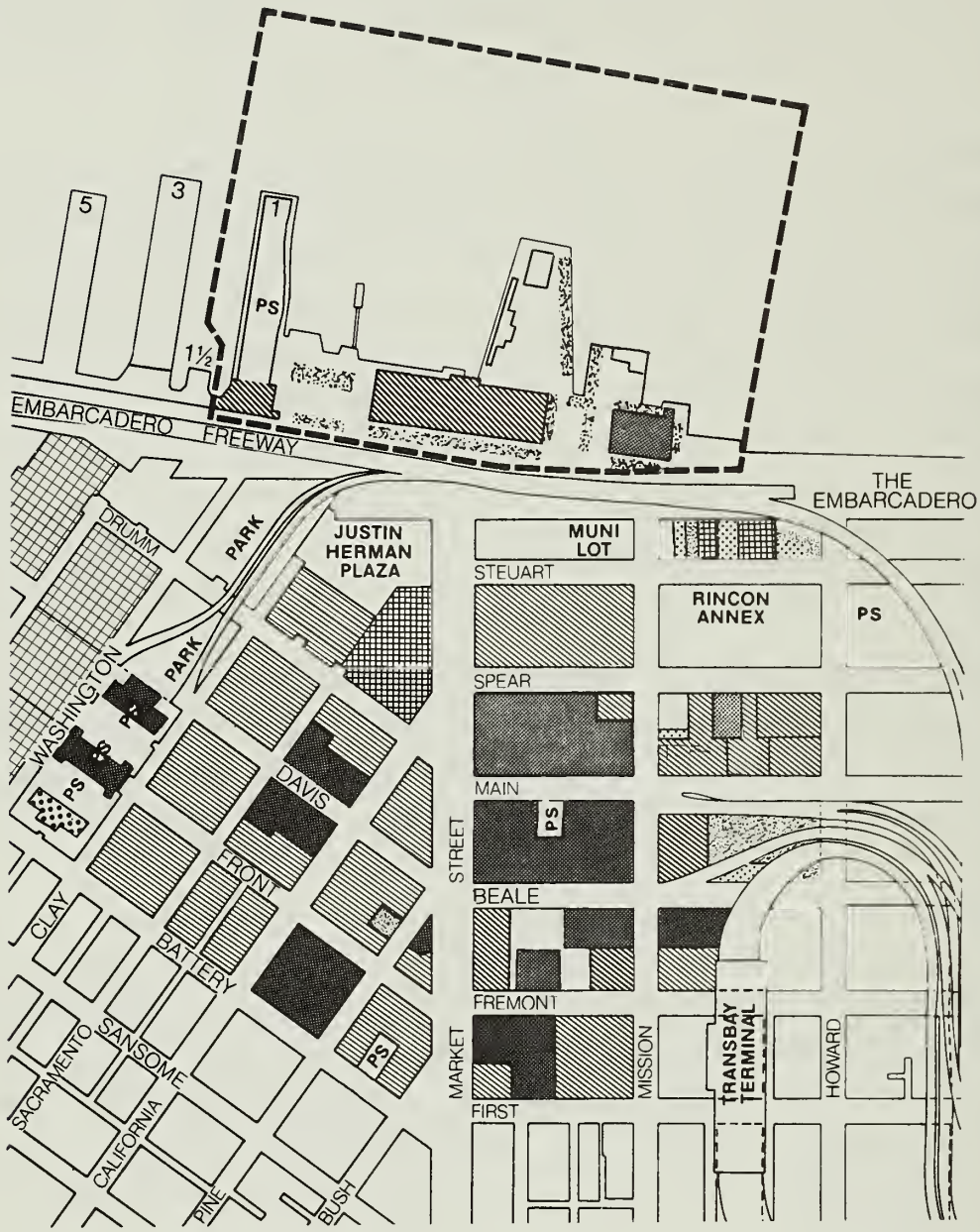
A 1,500-foot-long pedestrian promenade (The Embarcadero Promenade) connects the southern edge of the site to Pier 24 under the Bay Bridge.[9] A continuation of the promenade is planned between Pier One and Pier 7. The Port's plans to develop Pier 3 as public open space are in the design stage.

The Klamath, an historic ship (ferry) containing office space, is currently moored at Pier Five and may be moored at Pier Three at some future time. The Santa Rosa ferry is being rehabilitated at Pier Three, to accommodate office space, commercial and recreation space and public access. Two other historic ships are designated for temporary mooring at Pier Three, with eventual expected permanent mooring at Pier 24 to the south of the site. The Fresno and the Delta King will contain office space, commercial recreation, and public access.[10]

Existing land uses in the site area are shown in Figure 16 (p. 46). The Financial District west of the site is the most intensively developed area of the City. Within a quarter mile are about 14 million square feet of offices where about 56,000 people are employed. There are about 700,000 square feet of retail and restaurant facilities. The sponsor's market analyst estimates that 250,000 people are within a 20-minute walk of the site.[11]

figure 16

EXISTING LAND USE



LEGEND

- office
- office with ground floor retail and/or restaurant
- retail
- hotel
- residential with ground floor retail
- entertainment
- PS parking structure
- parking lot
- property line

source: Planning Analysis & Development

Within three blocks of the site, five projects are currently under construction: The Federal Reserve building, 101 California, 150 Spear Street, 101 Mission and Golden Gateway Commons Phase III. The first four are office buildings which together will add about 2.03 million square feet of space to the Financial District. The fifth is a mixed use project located between Broadway and Drumm, Jackson, Davis, Pacific and Front Streets. Golden Gateway Commons will contain 240,000 square feet of office and general commercial space, and 155 dwelling units when complete. The Golden Gateway Commons is part of an existing Redevelopment Agency project area that includes two 22-story apartment buildings, two 25-story apartment buildings and 58 townhouses, for a total of 1,254 dwelling units with 927 parking spaces.[12]

Footnotes:

1. San Francisco City Planning Commission, Resolution 6385, June 19, 1969.
2. Northern Waterfront Plan, page 3.
3. According to Section 66632.4 of the California Government Code, fill means "earth or any substance or material, including pilings or structures placed on pilings, and structures floating at some or all times and moored for extended periods, such as houseboats and floating docks.
4. Government Code Section 66632.4.
5. BCDC Permit Application No. 12-70, Ferry Port Plaza; there is no application on file at BCDC for the U.S. Steel project. Information on both projects is available in BCDC's files. Telephone conversation with Robert Batha, Environmental Analyst, BCDC, March 3, 1982.
6. Attorney General Thomas G. Lynch, Opinion No. 70-121, October 15, 1970.
7. January 17, 1977, by Resolution 7643 of the City Planning Commission; amended January 31, 1980 by Resolution 8481; May 29, 1980 by Resolution 8596; and on December 4, 1980, by Resolution 8781.
8. Rincon Point South Beach Redevelopment Plan, San Francisco Redevelopment Agency, adopted and approved by the Board of Supervisors of The City and County of San Francisco, Ordinance No. 14-81, January 5, 1981 and Final EIR/EIS EE80.267, State Clearinghouse No. 80061703.
9. EE76.392 Promenade Open Space, Negative Declaration, on file with the Department of City Planning, Office of Environmental Review.
10. Information on historic ships was obtained in a telephone conversation with Steven McAdam, Coastal Program Analyst, BCDC, September 17, 1982, and from the following environmental studies, on file with the Office of Environmental Review: EE77.114 Docking of Renovated Ferry at Pier 3 Negative Declaration; EE79.238 Ferry Boat Fresno Negative Declaration; EE79.65 Delta King Negative Declaration.
11. All figures on population, employment and amount of space in this paragraph are from Keyser-Marston Ferry Building Complex Market Study, August, 1981. This report is on file with the Office of Environmental Review.
12. San Francisco Redevelopment Agency, San Francisco Redevelopment Program: Summary of Project Data and Key Elements, January 1981, pp. 37-38.

B. Historic Resources

The site contains three buildings of historical interest: the Ferry Building, the Agriculture Building, and the Pier One bulkhead building. The Ferry Building is listed on the National Register of Historic Places, and is a National Historic Civil Engineering Landmark and a City landmark. The Agriculture Building is listed on the National Register of Historic Places. The Pier One bulkhead building is one of several arched wharf entrances that line the waterfront along The Embarcadero, and is listed in the City's 1976 Architectural Inventory with a rating of 3 for architecture and 4 for urban design quality (on an ascending scale of 1-5).

Ferry Building: The Ferry Building (Union Depot and Ferry House) is one of San Francisco's most prominent, historically significant structures. It was commissioned by the State Harbor Commission in 1884 and opened on July 13, 1898. From its completion until the late 1930's, the Ferry Building was the entrance to the city for 36 million Bay Area commuters a year, making it the second busiest passenger terminal in the world. The building was the last major commission of architect A. Page Brown. The building is an important contribution to turn-of-the-century engineering and Neo-Classical Beaux-Arts architecture. The Ferry Building extends for about 660 feet along the waterfront, with the 235-foot tall clocktower in the center. A claim made in 1898 that the Ferry Building was the most solidly constructed edifice in California was supported by its survival of the 1906 earthquake. In recognition of its historical and architectural significance, the Ferry Building was placed on the National Register of Historic Places in 1977, and was designated a City landmark (No. 90) the same year.[1]

The original design and use of the Ferry Building are analyzed in the Design Guidelines for Restoration and Adaptive Use of the Union Depot & Ferry Building prepared by Charles Hall Page & Associates, Inc., for the San Francisco Port Commission, 1978. These guidelines describe the original (as built) Ferry Building and modifications that have occurred; they also recommend rehabilitation for major facades and interior spaces consistent with the U.S. Secretary of the Department of the Interior's Standards for Rehabilitation governing historic structures.[2] (Readers interested in more detail may refer

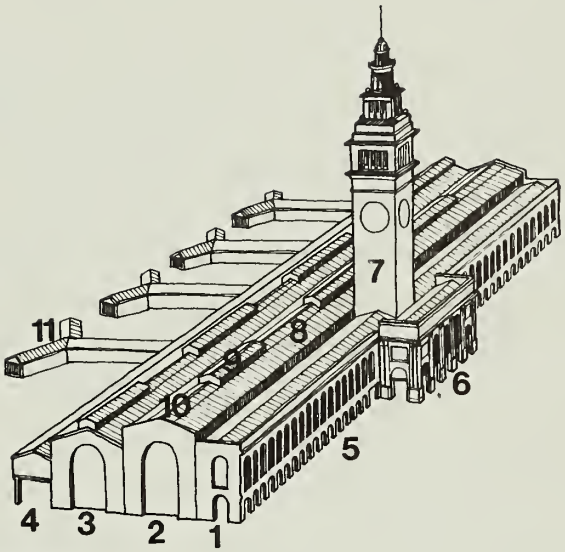
to the Page guidelines on file with the Department of City Planning, Office of Environmental Review.) For an alternative design consistent with these guidelines, see Alternative B-1, p. 202, of this EIR.

The Ferry Building is about 660 feet long on the north-south axis and 160 feet deep on the east-west axis. It is faced with Colusa sandstone. The building is divided into four longitudinal bays (Figure 17, p. 50). The first or City side bay originally contained an open arcade at ground level, with offices on the mezzanine and second levels; the north arcade was later glassed in to provide office space. The second bay was the largest and held the "great nave."[3] The third bay contained waiting rooms while the fourth contained the gallery. Remodeling has changed interior spatial relationships. The second and third longitudinal bays in the center of the building originally had skylights atop gabled vent monitors.[4] Large fan windows at the north and south ends of the second and third bays have been partially filled in on the south facade and removed on the north facade. The south part of the City side facade retains some historic character, especially the south elevation of the central portal and the arcade. The north wing retains little historic character, except for the double columns in the north elevation of the entry portal. Figures 5 and 17 (pp. 16 and 50) show existing conditions of the Ferry Building.

The central entry portal consists of five front bays in the form of a triumphal arch, as shown in the top drawing in Figure 18 (p. 51). The arches and windows are filled in with decorative latticework called clathrix. Clathrix on the ground level in the large arches right and left of center were added after 1915. Behind these clathrix were two grand staircases leading to the original second story waiting rooms. The left of center arch presently has no latticework and the left grand staircase has been removed. The World Trade Center sign projects from this archway and a hallway with ramp occupy the former staircase space. The archway right of center retains both the ground level clathri and the staircase. The center arch originally served as the main entrance to the building but has been filled in with a cafeteria. Foot traffic now enters the building off-axis under the World Trade Center sign. Decorative muntins [5] in the two northern portal arches and the entire

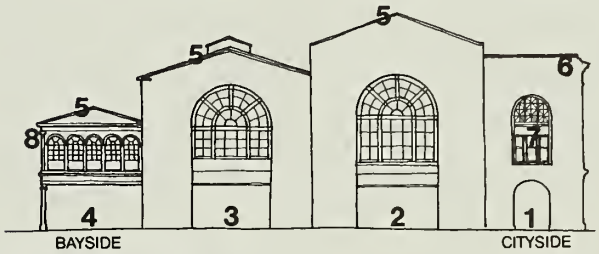
figure 17

AS BUILT CONDITIONS
Ferry Building



ISOMETRIC

(1) (2) (3) (4) four longitudinal bays
(5) front facade or continuous double arcades
(6) central entrance pavilion (portal)
(7) 240-foot campanile-type tower
(8) gabled roof
(9) vent monitors
(10) skylights
(11) ferry gangways

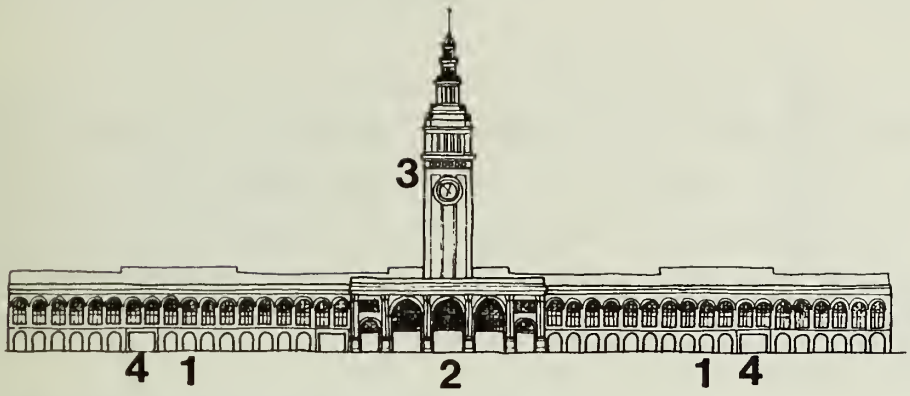


NORTH ELEVATION

(1) bay containing ground level arcade, upper level offices
(2) the "Great Nave" bay
(3) the waiting rooms
(4) the gallery
(5) gable
(6) parapet conceals arcade arch
(7) arch over arcade
(8) rear ornamental ironwork facade

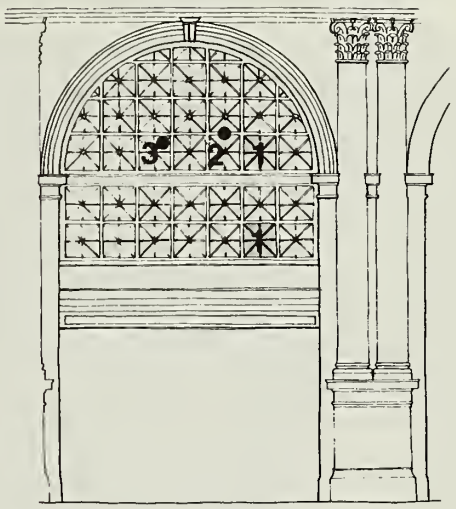
source: Charles Hall Page & Associates, Inc., Architecture & Urban Planning

EXISTING CONDITIONS
Ferry Building



AS BUILT WEST ELEVATION/CITYSIDE

(1) long, double arcaded wings
(2) central, entrance pavilion (portal)
(3) campanile-type tower
(4) vehicular passageways



AS BUILT FENESTRATION

(1) clathri or latticework glazing pattern
(2) glazing mullions (vertical and horizontal framework)
(3) glazing muntins (diagonal framework)

source: Charles Hall Page & Associates, Inc., Architecture & Urban Planning



EXISTING WEST ELEVATION

source: Port of San Francisco

northern wing above the arcade have been replaced with modern aluminum framed windows. A cocktail lounge has been added in the corner where the portal and the north arcade adjoin.

The Bay side or east facade has undergone extensive modification and retains little historic character or material. Originally, the building stepped down to the ferry slips through a sequence of changes in roof height. Two rows of arched windows and four passageways connected The Embarcadero and the Bay. (Figure 19, top, p. 53). Today, only a few of the lower row of arched windows remain in the south side of the east facade. Figure 19 also shows a photograph of the Bay side facade today.

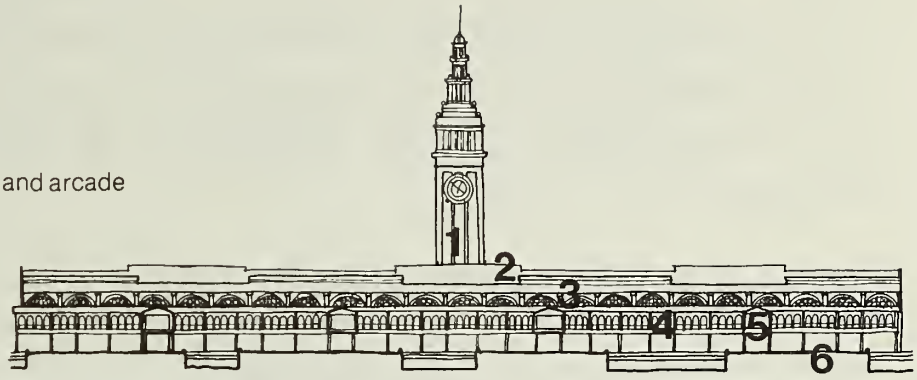
The interior finish and layout of the Ferry Building were also altered from the original. The ground floor had arcades on the City and Bay sides and there was a central passageway to the Bay under the clocktower, flanked on either side by the grand staircase. The second floor contained the main public spaces. Bayside, there were four large waiting rooms serving the ferry lines. Adjacent to these rooms on the Cityside was a nave 42 feet high and 48 feet wide, running the full length of the building, lighted by a clerestory and skylights, now covered over.[6] The gabled roof of the nave was supported by 22 arched trusses, many of which are now concealed. The mosaic "Great Seal of California" is at what was the center of the nave. The nave opened to the ground floor arcade via the grand staircase. Opposite the waiting rooms on the Bay side was a gallery that ran the full length of the building. In 1927, another floor was added to the gallery, and the roof trusses were raised to accommodate the change.[7]

The most extensive change to the interior of the building occurred in 1954 when the north wing was remodeled to accommodate the World Trade Center. Another floor was added in the nave and waiting room areas on the second floor, and a shear wall[8] was installed. In 1961, the south wing was converted to office space by installing a third floor and hanging a ceiling from the steel trusses. The gabled roof over the Bayside gallery was replaced with a flat deck roof.

figure 19 AS BUILT AND EXISTING CONDITIONS
Ferry Building

AS BUILT EAST ELEVATION/BAYSIDE

LEGEND
(1) the tower
(2) the "nave" roof and monitors
(3) the waiting room roof, monitors and arcade
(4) the gallery roofs and walls
(5) the gangway roofs and walls
(6) the ferry slips



source: Charles Hall Page & Associates, Inc., Architecture & Urban Planning

BAYSIDE VIEW OF THE FERRY BUILDING
(looking Southwest from the end of Pier One)



source: Planning Analysis & Development

The Agriculture Building: The Ferry Station Post Office, now called the Agriculture Building faces The Embarcadero opposite the foot of Mission Street. It was designed by A.A. Pyle of the State Department of Engineering and constructed in 1915.[9] For 10 years the Station Post Office served as the central postal facility for San Francisco. The present name derives from the San Francisco branch of the U.S. Department of Agriculture, which became the principal tenant in 1933.

Figure 20 (p. 55) shows elevations and a plan of the building. The front of the Agriculture Building contained a public lobby with offices above. The one-story section of the north facade still has some of the original roll-up garage doors which opened to the central mail processing area. A second floor addition was built above the mail processing area in 1918. This was designed and constructed with proportions and materials to match the original building.

The Agriculture Building is a finely-detailed, modified palazzo [10] with Renaissance ornamentation. The base blocks are Sierra white granite. The facade is made of pressed red brick laid in patterns around windows and second tier panels. Terra cotta ornamentation is used to imitate stone, in a complementary color of French ochre. A copper cornice denotes a separation between the wall and the clay tile hip roof.

The original lobby had a floor of pink Tennessee marble and elaborate stamp windows of ornamental iron of classical styling. Wood paneling was used in several offices. The building was modified by numerous tenants over time, and little remains today of the original interior materials. The main surviving element is the original staircase accessible from The Embarcadero entrance.

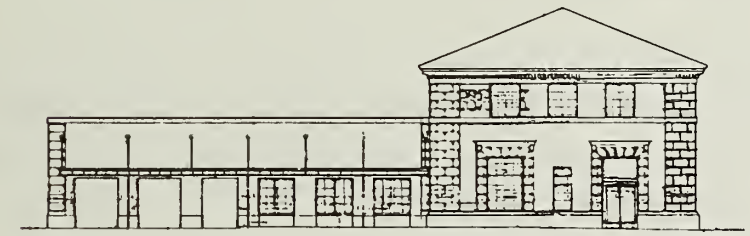
figure 20

AS BUILT CONDITIONS
Agriculture Building Elevations 1915, 1918



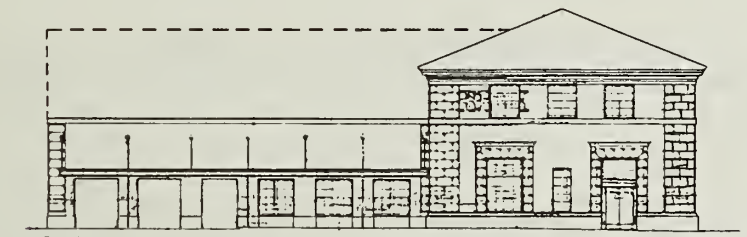
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1915—WEST ELEVATION/CITYSIDE PALAZZO (TWO-STORY BLOCK)



BAYSIDE CITYSIDE

1915—NORTH ELEVATION PALAZZO (TWO-STORY BLOCK)



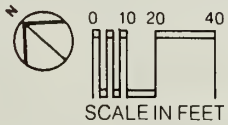
BAYSIDE CITYSIDE

1918—NORTH ELEVATION PALAZZO (TWO-STORY BLOCK)

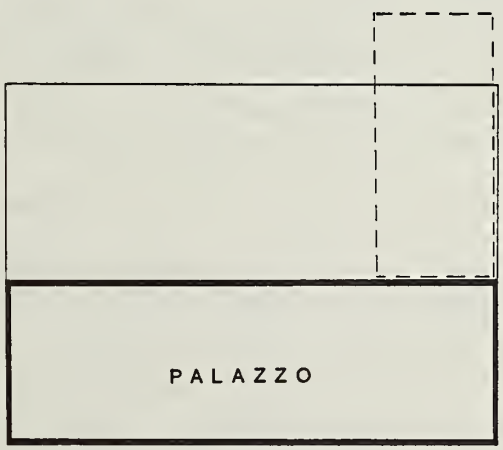
LEGEND

Two-story Palazzo

1918 Second Floor Addition



SCALE IN FEET



PLAN

source: Charles Hall Page & Associates, Inc., Architecture & Urban Planning

Pier One Bulkhead: This building is one of three similarly-styled bulkhead buildings north of the Ferry Building. The peaked roofs of Piers One, Three and Five are connected by two-story, flat-roofed buildings. The City's 1976 Architectural Inventory described Pier One as a "Classical Root, Renaissance style building"[11]. It strongly resembles the other two pier bulkhead buildings, which are classified "Mission Revival" style. Built in 1899, Pier One was used as a ferry slip until 1930 when it became a boat loading facility. East of the bulkhead is a 700-foot-long finger pier with a 30-foot-high shed on top.

Eight other buildings within four blocks of the site are noted in the historic/architectural building surveys Splendid Survivors and Here Today.[12] These eight buildings are listed in Appendix C (p. A-76). Many more buildings in the vicinity of the site are noted in the 1976 Architectural Inventory of the Department of City Planning.

Footnotes:

1. All historical information in this paragraph was taken from Charles Hall Page & Associates, Union Depot & Ferry House, San Francisco: Design Guidelines for Restoration and Adaptive Use of the Ferry Building, July 1978. This report is on file with and available from the Office of Environmental Review.

2. U.S. Department of the Interior, National Park Service, "Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings", first issued in 1978, revised January, 1980; U.S. Department of the Interior, Heritage Conservation and Recreation Service, "Standards for Historic Preservation Projects", 1979.

3. Traditionally, a nave is the main part of a cathedral; the term can be used to refer to any long central space, flanked by aisles.

4. A monitor is a section of roof raised to admit light.

5. Muntins are criss-crossed decorative wooden frames.

6. A clerestory is a wall with high windows that raises a section of roof to admit light.

7. Landmarks Preservation Advisory Board, Final Case Report, December 15, 1976.

8. A shear wall is one that provides lateral stability.

9. Charles Hall Page & Associates, Inc., Survey of Cultural Resources, Piers 14-22 1/2, The Agriculture Building & Fire Boat House, November 14, 1977, prepared for the Port of San Francisco.

10. Palazzo is the Italian word for palace; the term is applied to a large residence or building similarly styled.

11. This style refers to a Renaissance Design motif that uses elements of classical Roman or Greek architecture.

12. Splendid Survivors was prepared by Charles Hall Page & Associates for the Foundation for San Francisco's Architectural Heritage in 1979; Here Today was prepared by the Junior League of San Francisco in 1968.

C. Archaeology

Until the Gold Rush Era (1848-1852), the site lay beneath 12-22 feet of water in the center of Yerba Buena Cove. Therefore, the site is unlikely to have artifacts or other cultural remains from any prehistoric, Spanish, Mexican or Early American periods.[1] With the discovery of gold in California, shipping activity in Yerba Buena Cove increased, and sailors deserted their ships for prospecting. By 1850, over 500 vessels were moored in San Francisco Bay. Many were abandoned at their moorings and were either left to rot or offered for storage. Subsequently, the abandoned vessels were sold to breakers or burned to the water line in order to make way for active ships. At one time, a storeship of the Gold Rush Era was anchored southwest of the site. The possible location of the ship, named "Rome" or "Roma," is identified on a San Francisco Maritime Museum map of sunken ships. However, the author of the map, Harlan Soeton of the Maritime Museum, states that the ship's estimated location, east of Market Street, between Steuart Street and The Embarcadero, may not be accurate as "records are contradictory and fragmentary."[2] Soeton concurs with the beliefs of other investigators who state that, "even if the Roma was scuttled at that point, it was probably burned to the water line."[3]

To accommodate growth in shipping, several wharves were constructed between 1848-68. The site of the Ferry Building was crossed by the outer ends of two wharves that extended into waters up to 22 feet deep and were able to handle the largest vessels serving Gold Rush California. By 1856 the entrance to Yerba Buena Cove was criss-crossed by wharves. Yerba Buena Cove was being filled by 1859. The Embarcadero defined the official bulkhead line; it consisted of a planked walkway on piles that linked wharves between Pacific Avenue and Rincon Point. During the 1860s ferry service to the East Bay began, providing a link to Bay area communities and to the terminus of the transcontinental railroad in Oakland. A first seawall was constructed in 1867; the zig-zag wall responded to the then-existing shoreline and street pattern. Growing port activity made the first seawall inadequate; it was subject to sedimentation and eddying, which caused ships to strike against one another. A new, smoothly curved alignment east of The Embarcadero was proposed, and in 1878, the second seawall was begun. Due to difficulty of construction and lapses in funding, the section of the seawall now under the site was not begun until 1887. Landfill activity increased during this

period. Fill material consisted of quarried stone from the base of Telegraph Hill and sand from dunes South of Market. Filling and seawall construction near the Ferry Building was particularly difficult, as the site was located at the deepest part of the Cove.

It was not until the second seawall was completed in the vicinity of, first, Pier One in 1889, then the Agriculture Building in 1890 and, last, near the Ferry Building in 1892 that a sufficiently stable foundation existed on which to build a permanent structure. In 1894, A. Page Brown designed the present Ferry Building. Construction began in 1895 and was completed the following year. Mr. Brown died prior to completion.

Footnotes:
1. Allen Pastron, Ph.D., Archeo-Tec, letter dated August 12, 1981. A copy of Dr. Pastron's letter is on file with the Office of Environmental Review.
2. Harlan Soeton, Historian, San Francisco Maritime Museum, interview, June 17, 1981, conducted by Dai Williams, M.A.
3. Roger and Nancy Olmsted and Allen Pastron, San Francisco Waterfront: Report on Historical Cultural Resources, for the San Francisco Wastewater Management Program, December 1977, p. 357. A copy of the report is on file with the Office of Environmental Review.

D. Public Access, Recreation and Open Space

About 40% or 68,000 square feet of the outdoor area within the site is publicly accessible[1], without cost, at all times to pedestrians. No public pedestrian access exists along the southern or eastern edge of Pier One or along the Bay side of the Agriculture Building. The newly-constructed Embarcadero Promenade provides public access area south of the Agriculture Building. The dilapidated piers north and south of the Ferry Building are closed to the public. Existing surface parking impedes pedestrian movement throughout the site.

Other public waterfront amenities exist within the site boundaries, but outside the project sponsor's leasehold area. These include a public sitting and viewing area at Sinbad's Restaurant on the pier behind the Agriculture Building. A pedestrian bridge links this public sitting area to the BART platform; however, this bridge is also used for surface parking, which may

discourage use by pedestrians. There is a 15-foot high elevated walkway and viewing platform above the Golden Gate Ferry Terminal on the north side of the BART platform.

Pedestrian access around the Bay side of the Ferry Building is not continuous; so, pedestrians mistakenly seeking the Red and White Ferry at the Golden Gate Ferry Terminal must return via the passageway and go around the north side of the Ferry Building to reach the Tiburon ferry slip. The pedestrian way on the north side of the Ferry Building is also used for parking autos that belong to the car rental agency and by service vehicles.

A pedestrian promenade joins the site at the north and south ends. To the south, The Embarcadero Promenade is to front on a proposed 6.5 acre park planned as part of the Rincon Point-South Beach Redevelopment Project.[2] Three historic ships planned for mooring at Pier 3 will provide a combined public access area of no less than 31,500 square feet. (These could eventually relocate to Pier 24, as per the Total Design Plan.) In addition, Pier 3 will have a two-acre public recreation area developed by the Port with estimated completion in late 1982; this area would remain as open space until permanent open space is established on Pier 7 (providing Pier 7 is structurally sound). At that time, the amount of open space on Pier 3 could be reduced to about one acre.[3]

West of The Embarcadero opposite the Ferry Building, Justin Herman Park and Plaza, collectively named Embarcadero Plaza, provide about 1.6 acres of open space and an outdoor market for crafts vendors. The Plaza is the primary pedestrian link from Market Street to the site. Sydney J. Walton Square, north of Golden Gateway Center, provides an additional 1.7 acres of open space in the area, about four blocks northwest of the site.

Footnotes:

1. Accessible areas are defined as those areas on which a person may freely walk; surface areas signed as "no trespassing" or marked with surface parking are not considered "accessible" by BCDC, for example.
2. EE76.392, Negative Declaration for construction of a pedestrian promenade approximately 30 feet wide along the northern waterfront from Pier 24 to the Agriculture Building and EE80.267, and EIR/EIS for the Rincon Point-South Beach Redevelopment Project. Both are on file at the Office of Environmental Review.

3. Northeastern Waterfront Plan, pages 32-34; Thomas Yerkes, Deputy Director, Port of San Francisco, telephone conversation, May 19, 1982.

E. Urban Design and Views

The Embarcadero Freeway is a physical and visual barrier between the site and the Financial District and Downtown, particularly with respect to Market Street and Embarcadero Plaza, which have intense pedestrian use. The Ferry Building clocktower is visible from as far away as Twin Peaks; the western facade of the building is blocked by the two-tiered, 60-foot-high freeway. To soften the impact of the freeway, trees and berms were placed east of Embarcadero Plaza. These have the effect of further blocking views of the Ferry Building. Visual access to the site is also obstructed by rows of parking under the freeway. Figure 21 (p. 61) shows views toward the site from inland areas.

Major views from the site vicinity are toward the Bay. The Embarcadero Promenade provides panoramic views of the Bay Bridge and Treasure Island from the shoreline south of the site. Other Bay views are available from Howard and Folsom Streets. Views of the water from the site are available from the elevated walkway above the Golden Gate Ferry Terminal and along the northern apron of Pier One. The Bay Corporation's restaurant, Ferry Plaza, blocks easterly views of the water and Treasure Island as seen from the platform. The main public view of the Bay as seen from ground level at the BART platform is toward the Bay Bridge. Panoramic views including the Bay, the Bay Bridge and Angel Island are available from the public space on the northeast end of Sinbad's deck, and from the buildings on the site.

Pedestrian access to the water is not clearly indicated at the site. There is no direct connection to the Bay through the central portal, and the narrow passageway through the building to the Golden Gate ferry terminal is difficult for first-time users to find. Located in the recess of the south arcade, the passageway is marked by a small sign. The waterfront is accessible around the south side of the Ferry Building, but here views are obstructed by parked cars.

figure 21

VIEW TOWARD THE SITE



View of the Ferry Building Clock Tower from Market Street



Site Vicinity Inset

source: Planning Analysis & Development

Pier One and the Agriculture Building have deteriorated over time and a variety of additions to the Bay side and City side facades of the Ferry Building has changed its appearance. Pier One has been used for parking since 1969; the Agriculture Building has experienced differential settlement and has large cracks from the roof to the ground, visible on the exterior. The roof of the Agriculture Building slopes where it should be straight. Decks have deteriorated and some decking has fallen into the Bay. Parking on the sounder deck areas diminishes the visual quality of the site area and blocks views of the waterfront.

F. Transportation

Pedestrian Access and Circulation

Pedestrian access to the site is provided by a series of striped crosswalks across The Embarcadero, including a 12-foot wide crosswalk from Pier One to Washington Street; a 12-foot wide crosswalk from between Pier One and the Ferry Building to Clay Street; a 20 to 34-foot wide signalized crosswalk between Embarcadero Plaza and the central entry portal of the Ferry Building; and two 12-foot wide signalized crosswalks from the Agriculture Building to Mission Street. An 8-foot wide gangway at its south end connects the Ferry Building arcade with the Golden Gate Ferry terminal. Pedestrian volumes in the vicinity of the site (roughly a six-block radius from the Ferry Building) are in the range of 1,000-2,000 people per hour at any one point, except for the northern side of Market Street, between The Embarcadero and Drumm Street, where volumes can exceed 3,000 pedestrians per hour.

Sidewalk width and configuration in front of the Ferry Building constrain the volume and directional flow of pedestrians using the site. Of those walking and jogging north and south along The Embarcadero, few use the sidewalks under and adjacent to the Ferry Building arcade; pedestrians use a more direct route through the center of the parking lot in front of the Ferry Building. Vehicles emerging from Pier One often have difficulty seeing joggers.[1] Conditions in the narrow gangway through the Ferry Building are crowded (between 10-14 persons/minute/foot of sidewalk width)[2] for ferry users and other pedestrians during peak periods.

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Of the two signalized crosswalks to the site, the most heavily used is that linking Embarcadero Plaza with the central entrance to the Ferry Building under the clocktower. Peak hour (4:30-5:30) pedestrian volume at this crosswalk is about 2,000 persons, a condition that is considered impeded. (See Appendix F, p. A-87, for definitions of pedestrian flow rates.) The peak five-minute volume is about 300 pedestrians, which occurs at about 8:15 AM, shortly after the arrival of the Larkspur Ferry. Due to the limited amount of pedestrian space available, this volume is considered constrained. Pedestrians were observed to overflow into the parking area in front of the south arcade to avoid sidewalk congestion. Conditions are better during the evening peak 5-minutes, which occurs shortly before the departure of the 5:25 PM Larkspur ferry, when the pedestrian level of service is in the impeded category. Pedestrian flows during the noon hour, 12:00 AM to 1:00 PM, are less than either the morning or afternoon peaks, with a five-minute peak flow rate of 100 pedestrians and approximately 1200 pedestrians per hour, a level of service in the unimpeded category.[3]

Two traffic signals control the crosswalk in front of the Ferry Building: one for northbound traffic on The Embarcadero and one for the southbound direction. The two signals operate simultaneously on a 40-second cycle which provides 21 seconds of green time to vehicles on The Embarcadero and 13 seconds of green time to crossing pedestrians. Because the 40-second cycle length is roughly the same time it takes for pedestrians to walk from one signal to the other, most pedestrians who leave the first curb on the walk signal arrive at the next signal at the beginning of its walk phase. The lights are thus timed to minimize delay to pedestrians in completing this crossing.

Between 50-100 pedestrians per peak hour cross at the signalized intersection of The Embacadero and Mission Street. This signal does not provide sufficient time for pedestrians to reach the median of The Embarcadero roadway before the light changes, assuming an average walking speed of four feet per second. The signal setting causes a potentially hazardous condition for pedestrians crossing The Embarcadero. Pedestrian activity at this intersection is currently not high, although the Embarcadero Promenade is likely to increase such activity there in the future.

North of the site, pedestrian crossings are hampered by the curved alignment of The Embarcadero which limits sight distance so that on-coming cars are not seen soon enough to ensure safe pedestrian crossing. The Embarcadero is heavily used by joggers, particularly during the noon hours. Pedestrian/jogger/vehicular conflicts occur as vehicles emerge from the Pier One and other parking areas on site.

Muni stops on the northbound Embarcadero are located directly in front of the Agriculture Building and just north of the main entrance to the Ferry Building. Cars are often illegally parked at the stop in front of the Agriculture Building, obstructing pedestrian access. Access to the Ferry Building for the disabled is facilitated by two designated parking spaces in the off-street metered parking area in front of the building. One space is located just north of the main entrance; the other is located just south of it. One ramp is located south of the main entrance.

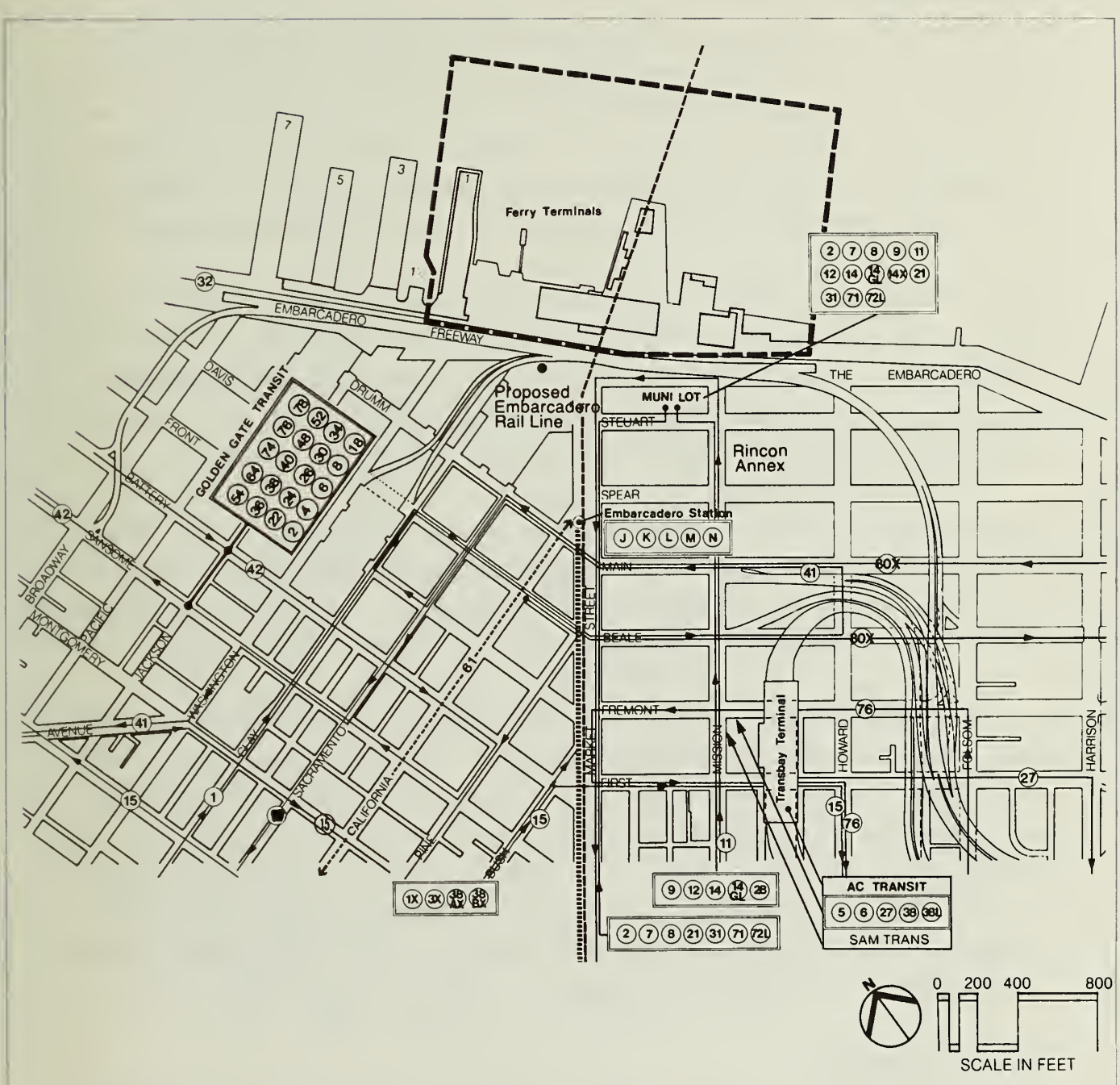
Transit

The site is a transportation center that includes ferry and bus service, and is located within six blocks of most City and Bay Area transit systems. The San Francisco Municipal Railway (Muni) operates 30 transit lines within 2,000 feet of the project site, along The Embarcadero and Market, Mission, Sacramento, and Clay Streets. Some 13 Muni trolley lines use the bus lot at the intersection at Steuart and Mission Streets as a turnaround. According to Muni criteria, none of these lines are at capacity at this location.[4] Transit lines serving the area are shown in Figure 22 (p. 65).

Embarcadero Station is within one block of the site and provides access to the Muni Metro and BART. Golden Gate Transit buses stop at Fremont and Market Streets and First and Market Streets, approximately six blocks from the site. SamTrans and AC Transit buses are accessible at the Transbay Terminal at Mission and Fremont Streets, also six blocks from the project site. Golden Gate Transit ferries to Sausalito and Larkspur and the Red and White ferry to Tiburon are accessible at the Ferry Building on the project site.

figure 22

TRANSIT LINES SERVING SITE



LEGEND

- Municipal Bus Route
- Municipal Railway Route
- Bart route
- Cable Car route
- Property line

source: Planning Analysis & Development with information provided by Wilbur Smith and Associates, Inc., Traffic Engineers and San Francisco Municipal Railway

Vehicular Traffic

The Embarcadero roadway provides two lanes of traffic in each direction, separated by a wide median containing columns supporting the double-deck Embarcadero freeway. The single-track Belt Line Railway operates about one train-run per day within this median. Between Broadway and Howard Streets, the southbound portion of the roadway weaves between columns of The Embarcadero Freeway, creating visibility problems for motorists and pedestrians.[5]

Traffic counts were conducted by Wilbur Smith and Associates, Traffic Engineers, at The Embarcadero at Market Street on Thursday, June 18, 1981. The northbound peak hour (4:45-5:45 PM) traffic volume was 1,070 vehicles per hour. The southbound peak hour volume was 1,260 vehicles per hour. Average daily traffic on The Embarcadero is estimated to be 21,200 vehicles.[6]

Intersection level-of-service was analyzed at the intersection of The Embarcadero and Mission Street, the closest signalized intersection to the site.[7] The service level was estimated to be at Level B, a condition of stable traffic flow. Figure 23 (p. 67) shows traffic volumes in the site area.

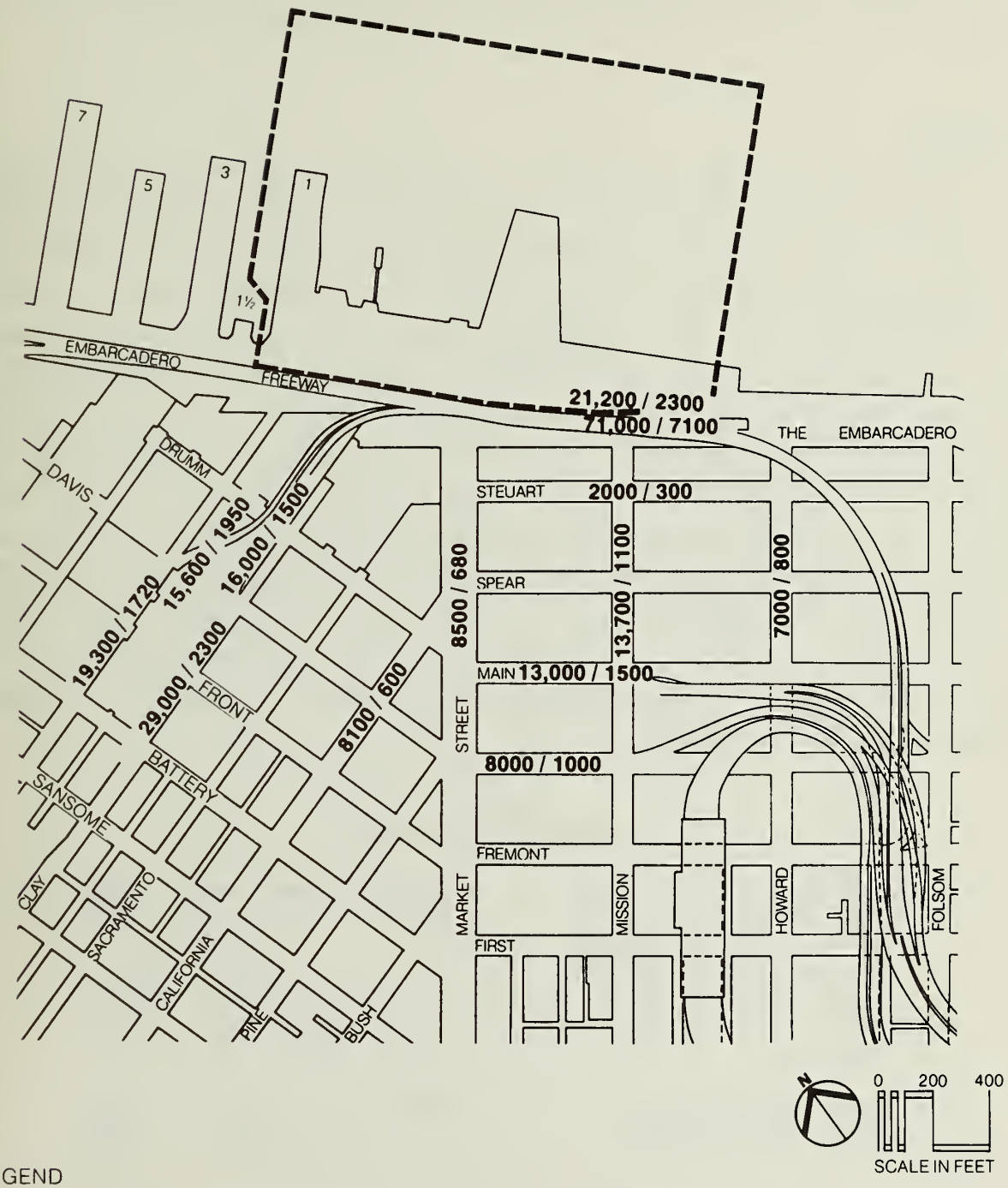
The Embarcadero freeway provides vehicular access to the site from the Bay Bridge and I-80 (then to U.S.101). The closest freeway off-ramps are at Main and Mission Streets and at Washington and Davis Streets, three and eight blocks from the site, respectively. The closest on-ramps are located at Clay and Davis Streets, and at Mission and Beale Streets, two and four blocks from the site, respectively. Average daily traffic volume (ADT) on the freeway near the Ferry Building is 71,000 vehicles. Peak hour traffic volume is estimated at 7,100 vehicles per hour.

Service and Delivery

No yellow or special truck loading zones are present on the site; most loading appears to be done from the paved areas alongside building entrances. A loading dock near the northeast side of the Ferry Building serves the World Trade Club. This dock includes five loading bays accessible via a fire lane along the north side of the building. Club management reports an average of 30 deliveries each day between 7:30-11:30 AM.[8] Trucks also load from the paved area along the Bay side of the south end of the Ferry Building, al-

figure 23

EXISTING TRAFFIC VOLUMES:
Daily and Peak



LEGEND

Average Daily Traffic/Peak Traffic

Property line

source: Planning Analysis & Development with information provided by Wilbur Smith and Associates, Inc., Traffic Engineers and State Department of Transportation, San Francisco Department of Public Works

though no specifically designated loading docks or bays exist. Little loading activity is apparent at Pier One and the Agriculture Building; Pier One is primarily a parking facility and the Agriculture Building is in office use.

Parking

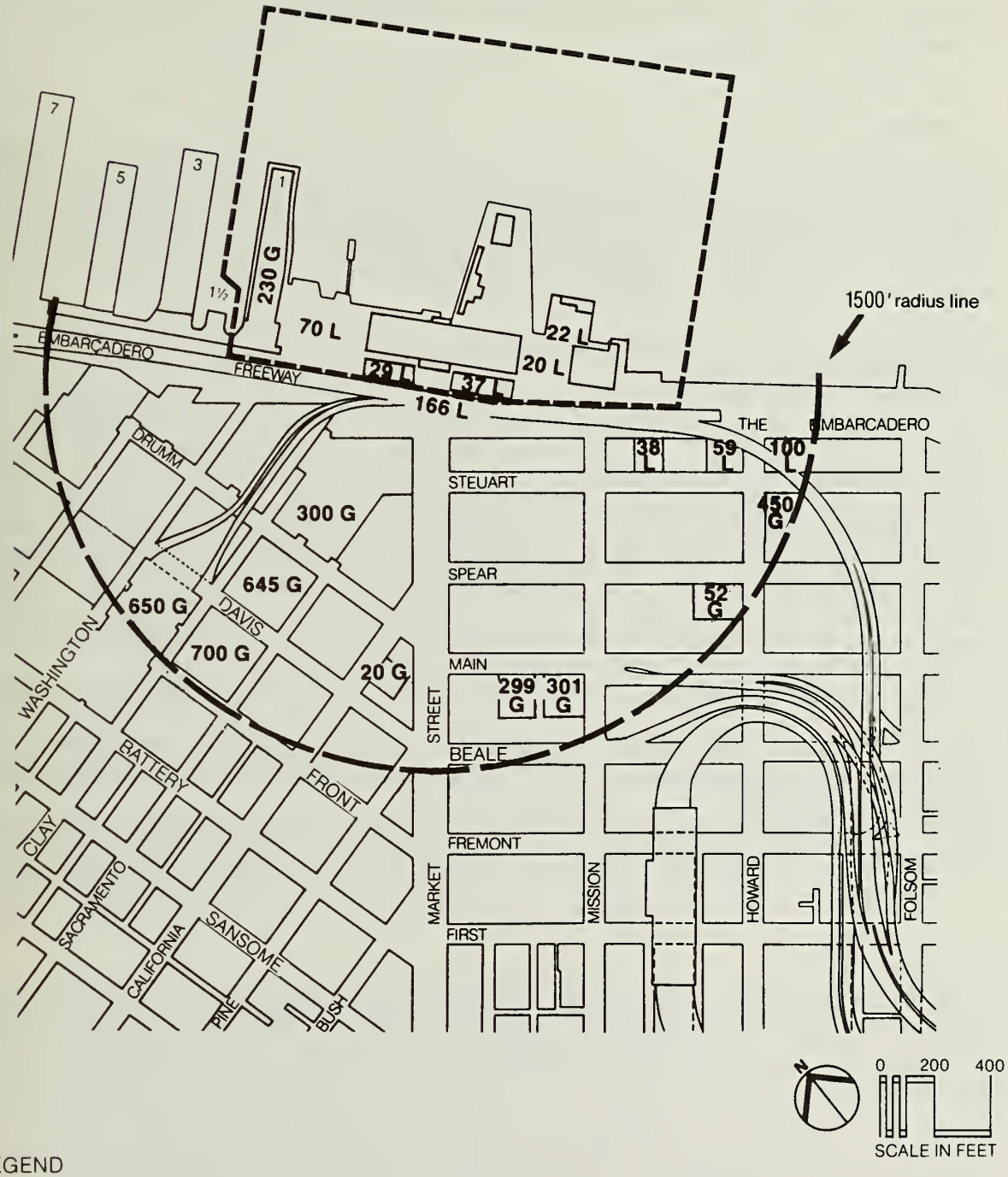
Parking on and adjacent to the site is controlled by the Port of San Francisco. Figure 24 (p. 69) and Table 4 below show the location of parking on and around the site. There are a total of 408 parking spaces on site: 230 long-term spaces on Pier One and an additional 112 long-term spaces in other locations on the site, or 342 long-term spaces; 66 off-street metered spaces in front of the Ferry Building; and 143 on-street along The Embarcadero. Metered spaces may be used for a maximum of two hours, seven days a week, from 7 AM - 7 PM. Occupancy of these spaces is over 90% on weekdays and less than 50% on evenings and weekends.[9] The Port of San Francisco operates an additional 166 off-street long-term spaces under The Embarcadero freeway near the site. There are approximately 3,400 other parking spaces within 1,500 feet of the site, the majority located underground in the Golden Gateway Complex.[10] These spaces are fully occupied during weekday daytime hours. Evening and weekend demand for parking is less and free parking is available then in Embarcadero Center.

Table 4
LOCATION OF PARKING

On-Site	Long Term	Short Term	Total
Pier One	230		230
North of Ferry Building	70		70
West of Ferry Building		66	66
Around Agriculture	42		42
			408
Off Site			
Under Embarcadero	166		166
Along The Embarcadero		143	143
			309
Other Garages and Lots			3,400
Total	508	209	4,117

Source: Wilbur Smith & Associates

figure 24 EXISTING PUBLIC PARKING LOCATIONS



LEGEND

G Parking Garage
L Parking Lot
(the number of spaces is given for each)
▬▬▬ Property line

source: Planning Analysis & Development with information provided by Wilbur Smith and Associates, Inc., Traffic Engineers and San Francisco Department of Public Works

Bicycle Access and Circulation

At the site, 21 bicycle spaces are located south of the main entrance to the Ferry Building within the arcade. The arcade appears to be used primarily for motorcycle parking.

Footnotes:

1. This and subsequent transportation information are derived from Wilbur Smith & Associates, Transportation Element, Ferry Building Complex EIR, September 1981, and from data provided by Frederick Dock, Traffic Engineer. A copy of the report has been included as Appendix F, pp. A-83 to A-106.

2. Pushkarev and Zupan, Urban Space for Pedestrians; definition of pedestrian conditions are given in Appendix F (p. A-87).

3. Ibid.

4. See Table F-6, p. A-99, in Appendix F.

5. Appendix F, p. A-83.

6. Appendix F, p. A-89.

7. Service levels are measures of the volume of traffic in an intersection compared to the capacity of the intersection to accommodate that volume, expressed as a ratio and summarized with a letter (in Appendix F, p. A-90). For a complete discussion of service levels in the site area, see p. A-89 of this appendix. Service levels were estimated using the critical lane method, a methodology described in Interim Materials on Highway Capacity, Transportation Research Circular No. 212, Washington, D.C., January 1980. The circular includes methodologies appropriate for calculating levels of service in urban, suburban and rural areas. Traffic movement counts were conducted at the Mission/Embarcadero intersection on Thursday, June 18, 1981.

8. Walter Portman, Manager, World Trade Club, telephone conversation, August 19, 1981.

9. Parking surveys performed by Wilbur Smith & Associates on Thursday, June 4, 1981 and Saturday, August 8, 1981. Parking occupancy in the evenings is similar to weekends.

10. City and County of San Francisco, Department of Public Works, Downtown San Francisco, Existing Off-Street Parking Map, 1975, updated June, 1981.

G. Noise

The thoroughfare noise level near The Embarcadero Freeway is 75-80 dBA L_{dn},[1] according to the Environmental Protection Element of the Comprehensive Plan. This places the west side of the site in a land use compatibility category for which offices and retail uses should be built only after a detailed analysis of noise reduction requirements are made, and needed noise insulation features are included in the design. The high noise level is due to the traffic on the two-tiered Embarcadero freeway and The Embarcadero roadway, with a combined volume of 92,200 vehicles daily. Noise is amplified and prolonged by echoes off the freeway structure and the east facade of the Ferry Building. The Northeast Waterfront Survey Technical Report assumes

that noise decreases to the 65 decibel level at a distance of about 400 feet from the freeway. As the site is about 400 feet from the freeway, the background noise level in the site area is about 65 L_{dn}, which places the project in an area with the highest general noise level in the City. The barrier effect of site buildings contributes to lower noise levels along the water.

Footnotes:

1. The decibel (dB) is the unit of sound energy intensity calculated according to a formula. It indicates how high the measured sound pressure level is above the threshold of human hearing (0 dB). Higher decibel values correspond to higher sound levels.

The dBA (A-weighted decibel) is a quantity, in decibels, read from a sound-level meter switched to the weighting scale labeled "A". The A-scale decibel is corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels.

L_{dn} is an averaged sound level measurement, based on human reaction to cumulative noise exposure over a 24-hour period, which takes into account the greater annoyance of night time noise. Noise between 10 PM and 7 AM is weighted 10 dBA higher than daytime noise. L_{dn} is calculated on the basis of known sound level variations over the 24-hour day.

H. Air Quality

San Francisco is in the center of the nine-county Bay Area air basin. The entire basin is designated by the California Air Resources Board as a non-attainment area for ozone (photochemical oxidant) and carbon monoxide (CO). "Non-attainment" means that the federal ambient air quality standards for these pollutants have been violated within the past two to three years.

San Francisco's air quality is the least degraded of the urbanized areas of the region. Much of San Francisco is generally upwind of major pollutant sources, such as industrial areas, airports, freeways and other urban uses. The prevailing westerly and northwesterly winds tend to carry pollutants from the City toward the East Bay and South Bay, making San Francisco a contributor to air quality problems in other parts of the Bay Area (especially ozone), rather than a recipient of pollutants from other areas. When atmospheric stagnation occurs as a result of calm wind conditions coupled with thermal inversions in the fall and winter, the potential exists for the entire Bay Area air basin to experience high concentrations of pollutants.

The Bay Area Air Quality Management District (BAAQMD) operates an air quality monitoring station approximately 1.7 miles southwest of the site. From 1976-1980, the City exceeded the one-hour federal ozone standard (.12 parts per million) only once, in 1976.[1] During 1977, 1978, 1979 and 1980, San Francisco did not exceed the one-hour federal standard for ozone. Nitrogen dioxide, a contributor to the formation of ozone, exceeded the State of California standard on four days in 1978, but not at all in 1979, 1980 and 1981. Suspended particulates did not exceed the state annual geometric mean[2], although the 24-hour state standard of 100 micrograms per cubic meter was exceeded on one day each in 1978 and 1979, six days in 1980, and one day in 1981. The less stringent federal standard of 150 micrograms per cubic meter was exceeded only one day in 1980 and not at all in 1981. The federal CO standard was not violated in 1980 but was exceeded once in 1981.[3] There were no violations of the state sulfur dioxide standard (SO_2)[4].

Motor vehicles are the largest source of CO, hydrocarbons (HC), and nitrogen oxides (NO_x) in San Francisco. Paved road travel is the largest source of particulates. Existing emissions attributable to the site area are primarily from vehicular traffic, and secondarily from stationary sources, such as boilers and furnaces, and paint and solvent use. Data available from the air quality monitoring station indicate rare violations of the most stringent ozone, CO, nitrogen oxide and suspended particulate (SP) standards. However, BAAQMD officials believe that the CO standard is frequently violated at major thoroughfares, such as the The Embarcadero and Geary Boulevard.[5]

Footnotes

1. This and subsequent air quality data are from the BAAQMD's Contaminant and Weather Summaries, 1976-1980. Data on 1980 conditions are from the BAAQMD's Air Currents, Vol. 24, No. 3, March 1981. Data on 1981 conditions are from Air Currents, Vol. 25, No. 3, March 1982.
2. The state standard is 60 micrograms per cubic meter.
3. BAAQMD, Air Currents, Vol. 25, No.1, January 1982. The federal CO standard is 9 parts per million (ppm) for the highest eight-hour average.
4. The state standard is 5 parts per hundred (pphm) for 24 hours.
5. BAAQMD, Irwin Mussen, telephone conversation, September, 1981.

I. Employment, Housing and Fiscal Factors

On-Site Businesses: The three buildings on the site have a combined 259,000 square feet of net occupied space. In addition, there are about 8,600 square feet used for parking, about 13,000 square feet of vacant office space in the Ferry Building, 83,000 square feet of parking in Pier One, and 1000 square feet of outdoor space leased by the Port. There are 221,700 square feet of net occupied space in the Ferry Building, 31,000 in the Agriculture Building, and 6,300 at Pier One. Within buildings, 82% is in office use and 9% in restaurant use. The remaining 9% is retail, storage and museum space. Twenty-six percent (26%) of the total site area is devoted to parking. Space use by building is given in Tables 1 and 2 (pp. 22 and 23).

A survey done in August 1981, indicates there are 100 separate firms in the three site buildings.[1] Of these, 84 are at the Ferry Building, 13 at the Agriculture Building, and 3 at Pier One. Average length of occupancy is 10.6 years. This figure is much higher than the median (4.5 years), because some tenants have been at the site for more than 70 years.[2]

The distribution of these firms by Standard Industry Classification is given in Table 5 (p. 74). The site is primarily populated by firms in the service sector (e.g., marketing, consulting, travel) and the wholesale/retail sector. Only 10% of the firms are in the finance, insurance and real estate (FIRE) sector. In addition to this industry classification, another distribution of firms by type of business is shown in Table 6 (p. 74). Import/export business, with 29%, and professional (primarily in the service sector) businesses, with 17%, comprise the largest number of firms.

The size of the firms is shown in Table 7 (p. 75), where the distribution of the number of employees by firm is given. Over 85% of firms have 10 employees or less; 32% have one or two employees. There are two tenants with more than 100 employees, the Port of San Francisco and California Canners and Growers. The average number of employees per tenant is 9.6, with a median of 3.5.[3]

Table 5

CURRENT TENANTS AT SITE BY INDUSTRY CATEGORY

	Number of Firms
Finance, insurance, real estate (FIRE)	10
Services[1]	36
Transportation and utilities	8
Manufacturing	1
Wholesale retail	36
Government	8
Other	1
Total	100

1. Includes health, legal, education, social, amusement, recreation, repair, research, business services, hotels.

Source: Planning Analysis & Development survey of tenants and employees; see Appendix G, pp. A-107 to A-126. Standard Industrial Classification, U.S. Office of Management and Budget.

Table 6

CURRENT TENANTS AT SITE BY TYPE OF BUSINESS

	Number of Firms
Import/export	29
Travel	9
Professional	17
Retail, restaurant	4
Other service	14
Government	8
Water-related	9
Other	10
Total	100

Source: Planning Analysis & Development survey of tenants and employees; see Appendix G, pp. A-107 to A-126. Standard Industrial Classification, U.S. Office of Management and Budget.

Table 7

NUMBER OF EMPLOYEES OF CURRENT TENANTS AT SITE

Number of Employees	Number of Firms
1	16
2	16
3-5	40
6-10	15
11-30	6
31-100	5
100+	2
Total	100

Source: Planning Analysis & Development survey of tenants and employees; see Appendix G, pp. A-107 to A-126.

Table 8

NUMBER OF EMPLOYEES BY INDUSTRY OF CURRENT TENANTS AT SITE

	Number of Employees	Percent
Finance, Insurance, Real Estate (FIRE)	29	3
Services[1]	204	21
Transportation and Utilities	39	4
Manufacturing	2	0[2]
Wholesale, retail	448	47
Government	216	23
Other	20	2
Total	958	100

1. Includes health, legal, education, social, amusement, recreation, repair, research, business services, hotels.

2. Less than 1%.

Source: Planning Analysis & Development survey of tenants and employees; see Appendix G, pp. A-107 to A-126.

On-Site Employment: There are 958 persons employed on-site according to the survey of tenants. The types of firms in which these persons are employed are shown in Table 8 (p. 75), which lists the number of employees by industrial sector of the firm employing them. The majority are in the wholesale and retail sector (47%) and in the services sector (21%). The occupations of these employees are shown in Table 9 (p. 77). The largest three categories of workers are clerical (32%), professional or technical (32%), and manager or administrator (28%).

Location of Employee Residences: The counties in which the employees live are given in Table 10 (p. 77): 43% live in San Francisco, 26% in the East Bay, 17% in North Bay, and 13% on the Peninsula. This distribution is similar to that in another study of residential patterns for employees in San Francisco, in EE80.26: 101 Montgomery Final EIR, certified May 7, 1981, p. 239. This EIR is on file at the Office of Environmental Review.

Fiscal Revenues: The site is owned and administered by the Port of San Francisco, an enterprise fund of the City and County of San Francisco. (An enterprise fund is a self-supported public agency which retains its own revenues and does not receive monies from the General Fund.) Approximate gross revenue to the Port generated at the site was $2,056,700 in 1981: approximately $1,825,850 from long-term leases and licenses[4] and approximately $230,850 from parking.[5]

Property taxes are not levied on site users; however, possessory interest taxes are paid by tenants at the site, based on the amount of rent. At a tax rate of $1.23 per $100, the $1,825,850 in lease and license income to the Port is estimated to yield $22,460 in possessory interest tax, paid to the City of San Francisco, in 1981. A 15% tax is included in the gross revenues of $230,850 from parking[6]; it yielded $30,110 in parking tax to the City in 1981.

Payroll tax is paid on the earnings of 694 of the 958 employees at the site. Employees of government agencies, banks, and insurance companies are not subject to the payroll tax. Payroll tax is, moreover, paid only by firms with a tax liability in excess of $500. Using estimated average annual

Table 9
OCCUPATION OF CURRENT EMPLOYEES AT SITE

	Number of Employees	Percent
Clerical	230	32
Proprietor	13	2
Retail Sales	7	1
Wholesale	7	1
Professional or Technical	228	32
Manager or Administrator	199	28
Food Service	12	2
Other Service and Administration	16	2
Other	8	1
Total	720[1]	101[2]

1. Less than 958 due to number of employees responding to questionnaire and number of those responding to the question.

2. Due to rounding.

Source: Planning Analysis & Development survey of tenants and employees; see Appendix G, pp. A-107 to A-126.

Table 10
RESIDENCE OF CURRENT EMPLOYEES BY COUNTY

	Number of Employees	Percent
San Francisco	308	43
Marin	117	16
Sonoma	7	1
Alameda	96	13
Contra Costa	83	12
Solano	7	1
San Mateo	79	11
Santa Clara	15	2
Other	9	1
Total	721[1]	100

1. Less than 958 due to number of employees responding to questionnaire, and the number of those responding who answered the question.

Source: Planning Analysis & Development survey of tenants and employees; see Appendix G, pp. A-107 to A-126.

earnings of $25,600[7] and a payroll tax rate of 1.1% of total earnings, the 16 firms subject to the tax, with one employee, pay no tax, as their liability is about $282. Firms with two employees are near the threshold, with a liability of $564. Assuming that in one-half the firms one person is an owner who is exempt, the 16 two-person firms at the site[8] generated about $4,500 in payroll tax. The 59 firms with more than two persons subject to payroll tax[9] generated about $192,000 in payroll tax. Thus, payroll tax is estimated at $196,500 for 1981.

Sales tax revenues allocated to the City of San Francisco are 1% of taxable sales. Using data on downtown office workers, the average worker at the site is estimated to spend about $1,120 annually on taxable expenditures in San Francisco.[10] Thus, sales tax revenues resulting from the expenditures of the 958 employees of the current site are estimated at $10,700 in 1981.

Sales tax revenues allocated to BART from the 0.5% additional sales tax are estimated to be about $5400 in 1981. Of this amount, 75% is received directly by BART, with the remainder distributed by the Metropolitan Transportation Commission among BART, Muni, and AC Transit.

In addition to sales tax on expenditures by employees at the site, is sales tax generated by on-site retail and restaurant space. Based on average gross receipts of $100 per net square foot of such space[11], the existing net 26,800 square feet are estimated to generate $26,800 (1%) for the City of San Francisco and $13,400 (0.5%) for BART in 1981. The State of California receives the remaining 5%, for a total of $134,000.

The utility users' tax is paid on water, gas, electricity, and telephone usage. Water usage of 2,459,300 cubic feet at 0.414 cents per cubic foot[12] yielded about $500 at the tax rate of 5%. Gas usage worth $75,220[13] yielded $4,140 per year at the tax rate of 5.5%. Electricity usage worth $346,000[14] yielded $19,030 per year at the tax rate of 5.5%. Using an estimate of $1.40 per square foot for the average annual telephone bill[15], 258,000 square feet at the site is estimated to yield $18,080 per year at the tax rate of 5%. Thus, the total utility users' tax for the site is estimated to be about $41,750 in 1981.

The Port does not pay a gross receipts tax on rental income from buildings on the site.[16]

Total revenues to the City and County of San Francisco from the possessory interest tax, parking tax, payroll tax, the non-BART sales tax, and the utilities tax equal about $328,700 for 1981.

Costs: The City incurs costs in servicing the existing buildings. Police, fire, and general government expenditures are supported primarily by the City's General Fund. Most street maintenance, street improvement, and traffic control costs are supported by other revenue sources, such as fines and federal and state aid.[17] Deriving dollar estimates of these costs is extremely difficult, as there is a lack of adequate data and no accepted methodology for apportioning costs. The difficulty of estimating costs is further complicated by three factors. First, the project is not within the Central Business District; thus findings about the downtown may not be applicable. Second, this site is publicly owned, while most studies have focused on private development. Third, the Port provides some of its own services. Because the Port owns the surrounding streets, it is responsible for their maintenance and improvement; the Port also owns a fireboat serving the site.

The General Fund provides a subsidy to Muni. At 1980-81 revenue and cost estimates, and under the assumption that each daily Muni commuter will buy a Fast Pass, the per ride General Fund subsidy to Muni's operating budget is $0.39.[18] About 26% of the employees in site buildings ride Muni to and from work. The General Fund subsidy to Muni due to these riders can be estimated at $45,462 in 1982.[19] Two factors are left out of the above analysis: (1) capital costs; and (2) the cost of non-commute trips, such as employee day trips, business visitor trips, and retail customer trips. Site buildings help offset the Muni deficit through contributions to the General Fund. In the 1980-81 budget, 7% of discretionary General Fund revenues were allocated to Muni. Seven percent of the $328,700 in General Fund revenues generated by the existing buildings is $23,010.

As of February 1982, BART fares cover about 43% of BART costs. For each passenger trip an average of $1.00 is due to fares, and an additional $1.33 in costs must be supported by some other revenue source.[20] Most of the additional cost is supported by the 0.5% BART sales tax. About 9% of employees in site buildings ride BART to and from work.[21] The cost to BART in 1981 that was not covered by riders' fares can be estimated at $50,700.[22] BART's direct revenues from sales tax generated by employees in the buildings and by the retail space was about $18,780 for 1981. BART's net deficit as a result of employment and other activities at the site in 1981 was therefore $31,920.

Footnotes:

1. See Planning Analysis & Development, Methodology for Surveys and Projections for Employment, Housing and Fiscal Factors for the Ferry Building Complex, October 26, 1981, revised August 15, 1982. This report is included as Appendix G, pp. A-107 to A-126. with the Office of Environmental Review.

2. The mean represents the average value, or sum of the cases divided by the number of cases; the mean is affected by very high or very low cases. The median is the value for which one half of the cases are above and one half of the cases are below that value.

3. Ibid.

4. Thomas K. Yerkes, Deputy Port Director, Administration and Finance, Port of San Francisco, letter, August 28, 1981.

5. Thomas K. Yerkes, telephone conversation, September 1, 1981.

6. John Brooks, Chief Accountant, Port of San Francisco, telephone conversation, August 7, 1981.

7. Average annual earnings of downtown office workers in 1974 were $16,335 (SPUR, Impact of Intensive High Rise Development on San Francisco, p. 248). Between the time of that survey and the end of 1980, average earnings of employees in the finance, insurance, and real estate industries rose 57% (U.S. Bureau of Labor Statistics, Monthly Labor Review, January, 1981). 1.57 x $16,335 = about $25,600.

8. Planning Analysis & Development, op.cit., pp. A-108 to A-109.

9. This estimate is based on the actual number of employees (682) at firms with more than two employees, as indicated in the Planning Analysis & Development survey cited above.

10. Taxable expenditures within the Central Business District per office worker were $715 per year in 1974 (SPUR, Impact of Intensive High Rise Development on San Francisco, p. 262). Between 1974 and the end of 1980 average earnings of employees in the finance, insurance, real estate industries rose 57% (U.S. Bureau of Labor Statistics, Monthly Labor Review, January, 1981). 1.57 x $715 = about $1,120.

11. EE79.57, Daon Building EIR, certified June 12, 1980, p. 31. This EIR is on file at the Office of Environmental Review.

12. Teresa J. Hansell, San Francisco Water Department, letter, June 29, 1981.

13. William V. McIntosh, Power Engineer, PG&E, telephone conversation, July 2, 1981.

14. Ibid.

15. EE80.26, 101 Montgomery Street EIR, certified May 7, 1981, p. 44. This

EIR is on file at the Office of Environmental Review.
16. John Brooks, Chief Accountant, Port of San Francisco, telephone conversation, August 7, 1981.
17. City and County of San Francisco, Annual Appropriation Ordinance, Fiscal Year Ending June 30, 1980.
18. Bruce Bernhard, Muni Chief Accountant, telephone communication, August 10, 1982. The average $0.39 deficit per mile is based on 1980-81 Muni budget figures of an additional cost per ride (marginal cost) of $0.71 and an average fare revenue per trip of $0.32. Muni is unable to provide more recent data on cost and revenue figures per passenger.
19. Using 260 work days a year, absenteeism of 10% (holidays, vacations, sick leave), and 2 rides per day, each worker will ride 468 times per year. To estimate the cost: 958 employees x 26% ride Muni x 468 rides per year x .39 deficit per ride = $45,462 per year.
20. William Geolz, Comptroller and Treasurer, BART, telephone conversation, March 11, 1982.
21. See Appendix F, Table F-5, p. A-97.
22. Cost estimate is based on the following calculation: 958 employees x 8.5% ride BART x 468 rides per year (see Footnote 19 above) x $1.33 deficit per ride = $50,685 per year.

J. Marine Life and Water Quality

Marine Life: The submerged part of the site is considered a marine environment, although brackish characteristics occasionally develop as a result of a seasonal influx of fresh water. Several marine communities exist in the site environment, which consists of water, Bay mud and several thousand piles under buildings and piers. Marine life at the site includes floating microscopic plants (phytoplankton) and animals (zooplankton), fish, and birds.[1] There are no known populations of rare or endangered species in the area of the Ferry Building Complex. Protected species that could visit the site in transit include the brown pelican, harbor seals, and porpoises.[2]

The relationships between the various communities found at the site are complex and community boundaries are difficult to define. For example, many benthic (stationary, bottom dwelling) animals possess larval stages that appear in open water (the pelagic environment), and benthic species commonly feed on pelagic forms. Likewise, some pelagic organisms use the benthic component as a food source.

The pelagic or open water community supports microplankton (microscopic, photosynthetic organisms such as algae, bacteria, or diatoms), zooplankton (such as small crustaceans and larval forms of barnacles and worms), fish, birds and marine mammals, in ascending order along the food chain.[3]

The benthic community includes mussels, crustaceans (hard shelled animals such as barnacles) and sponges, which live permanently attached to wharf pilings and the rocks and seawall at the shoreline; and shrimp, crabs, clams, and various species of worms, which live in the bottom sediments.[4]

Fish found in the site area include both open water and bottom dwelling varieties. Game fish caught off local piers include shiner perch, scalpin, rock fish, striped bass, rays, kingfish, jack smelt, and fert fish. There is no commercial fishing in the vicinity of the site, although a few recreational fishermen occasionally use the BART platform.

This segment of the waterfront is not considered an important habitat for shorebirds, because most waterbirds use water environments less than 18 feet deep, and the depth of the water at the site area is often greater than 18 feet. [5] The predominant bird species that would be expected to use the area for feeding, resting or shelter include: gulls, cormorants, grebes, ducks and scooters, buffleheads and scaups. The brown pelican is the only endangered bird species that might visit the site. Marine mammals, such as sea lions, seals and porpoises are found in various parts of the Bay, but they are not abundant. These species do not depend upon the study area as a habitat, although they pass through the area.[6]

Water Quality: The site is located at and partially in Central San Francisco Bay, which has the highest water quality within the Bay system, due to tidal flushing.[7] However, San Francisco wastewater effluent degrades local water quality when storm water causes sewers to overflow (about 80-100 times a year). The result is untreated sewage flowing into the Bay during storms.

The C-3 sewer line was installed under The Embarcadero in 1980, and will be operating by November, 1982.[8] When this is done, sewage from the site area which now (10/82) receives primary treatment at the Northpoint plant will

receive secondary treatment at the Southeast Plant prior to discharge into the Bay.[9] The C-3 line and associated sewer system components will reduce untreated wet weather flows from about 80 to about four a year.

Water quality problems in the Bay involve oxygen depletion, biostimulants, toxicity and oil or chemical spills. Pesticides found in waters throughout the Bay originate from agriculture drainage, municipal storm and sanitary sewer systems, and urban runoff.[10]

Footnotes:

1. This and subsequent technical information and impact analysis are derived from Marine Biota Study for the Ferry Building Draft Environmental Impact Report, by Harding-Lawson Associates, June 18, 1981. A copy of the full report is on file in the Office of Environmental Review.

2. California Department of Fish and Game. At the Crossroads 1978, A Report on California's Endangered and Rare Fish and Wildlife; and State of California, California Administrative Code, Title 14, Section 670.2, 1977.

3. See Marine Biota Study, op.cit., for a complete list of marine life found in the site area. A diatom is one of an order of microscopic unicellular marine or vegetable organisms.

4. For more information about the more than 30 species of benthic organisms in the Central Bay, see Storrs, P. N., Pearson, E. A., and Selleck, R. R.E., 1966. Final Report. A Comprehensive Study of San Francisco Bay, Vol. 2 (Biological Sampling and Analytical Methods). Sanitary Engineering Research Laboratory, University of California, Berkeley, SERL Report No. 65-8. This report is available at the BCDC library.

5. Bay Conservation and Development Commission, Some Ecological Aspects of San Francisco Bay, 1966, page 112. This report was prepared as part of the background research for the San Francisco Bay Plan and is available in the BCDC library.

6. California Department of Fish and Game, op. cit.

7. Extension of Entrance to Islais Creek Channel, Final Environmental Impact Statement, October, 1975, Office of the Chief of Engineers, Department of the Army, p.9.

8. Jake Sloan, San Francisco Clean Water Program, Project Manager for North Shore and Channel Outfall projects, telephone conversation, August 4, 1981.

9. Primary treatment -- usually sedimentation -- is the first (sometimes the only) major treatment in a wastewater treatment works. This results in the removal of a substantial amount of suspended matter but little or no colloidal and dissolved matter. Secondary treatment refers to the treatment of wastewater by a biological or physical chemical process, after primary has occurred. Secondary treatment provides approximately 90% removal of biochemical oxygen demand--the quantity of oxygen used in the biochemical oxidation of organic matter in a five-day period.

10. State Water Resources Control Board, Water Quality Control Plan: San Francisco Bay Basin (2), July 1975, Abstract, p. 13.

K. Geology and Seismicity

Geology: Soil conditions at the Ferry Building and Pier One are similar. Very little subsurface information is available for the Agriculture Building, but the project engineers believe that, due to its proximity, subsurface conditions are similar to those at the other buildings.[1]

The Bay bottom varies between -8 and -15 feet San Francisco Datum.[2] The soil is generally composed of San Francisco Bay mud, dense clay and sand. Inland of the sea wall, located roughly between The Embarcadero and site buildings, the soil is composed of sand fill over Bay mud and clays.

The Ferry Building is supported on timber piles located under both the pier foundations and the concrete seawall. Beneath the west facade of the Ferry Building, the seawall extends downward 20 feet. West of the seawall, a 100-foot-wide pile-supported relieving platform holds up 10 feet of landfill and The Embarcadero roadway.

Pier One is supported by timber piles; the seawall under the pier extends 16-17 feet deep, is made of concrete and is supported on timber piles.

The Agriculture Building is supported on reinforced concrete piles outboard of the seawall, and on timber piles inboard of the seawall. The seawall is 20 feet deep and timber-supported under the Agriculture Building.

Seismicity: The site is in a Special Geologic Study Area in which there is potential for both ground failure and inundation during an earthquake. The site is also in an area which has potential for tsunami inundation[3] according to the Community Safety Element of the Comprehensive Plan.

The Bay area is one of the most active earthquake regions in the country. The major active faults nearest the site are the northwest-trending San Andreas and Hayward Faults, approximately 8 miles southwest and 10 miles northeast of the site, respectively. The 1906 San Francisco earthquake, which occurred along the San Andreas Fault, had an estimated magnitude of 8.25 on the Richter scale[4] and caused extensive damage. In April 1979, an earthquake of magnitude 4.2 Richter occurred along the San Andreas Fault,

with the epicenter near Burlingame; no damage was reported in San Francisco. The Hayward Fault has not shown linear displacement in recent times, but creep has occurred at a rate of one-half foot in the last 50 years.

The Ferry Building, Pier One and the seawall which runs along the length of the site were all constructed prior to the 1906 earthquake, and were left relatively undamaged by it compared to the other structures then in the area. The Ferry Building sustained minor but visible damage in the 1906 earthquake, which caused some iron trusses to twist out of shape.

Footnotes:

1. The material in this section is based on Harding-Lawson Associates, Phase 1 Geotechnical Engineering Services, Ferry Building Complex, April 8, 1981, pages 3-4. A copy of the full report is on file with the Office of Environmental Review.
2. A reference point for surveying and vertical distance measurements. The elevation of the San Francisco Datum is 8.6 feet above mean sea level.
3. Tsunami are a series of sea waves created by an earthquake, a coastal or submarine landslide or a volcanic eruption at some distance from the point of run-up.
4. The Richter scale measures magnitude of earthquake based on the amount of energy released. It is a logarithmic scale, with each full point increase representing 30 times as much energy released as the previous point (i.e. a magnitude 5 earthquake releases 30 times as much energy as a magnitude 4 earthquake.

IV. ENVIRONMENTAL IMPACTS

A. Impacts Found Not To Be Significant

A Final Initial Study (see Appendix A, p. A-2) was prepared and a determination that an EIR was required was made on May 29, 1981, for the proposed Ferry Building Complex. The Initial Study identifies potential environmental impacts which could result from the project. The Initial Study also identifies environmental effects that would be insignificant. It has been determined through the Initial Study that the effects of the project would be insignificant in the following areas: land use compatibility; wind; operational noise; public services and utilities; and hazards. Therefore, these are not discussed in this EIR.

B. Land Use, Plans and Policies

Policy Impacts: The project would be consistent with some policies of the Total Design Plan (approved by the Port Commission, endorsed by the Planning Commission, and approved by BCDC), the Northeastern Waterfront Plan (of the San Francisco Comprehensive Plan), and the Special Area Plan No. 1 of the State Bay Plan, but would require amendments to these plans because it would conflict with other policies. The relationship of the proposed project to specific land use policies is shown in Table 11 (pp. 90-94).

The Total Design Plan and the Northeastern Waterfront Plan are consistent, contain similar policy language, and are equally specific regarding the amount of each type of land use permitted on the site. The Special Area Plan is less specific than either of these; it provides the principles on which they are based. In the succeeding discussion, the Northeastern Waterfront Plan and the Total Design Plan are collectively referred to as "the Plans" because of their similarity--amendments to one would be identical to amendments to the other. Whenever the Special Area Plan is referred to, it is mentioned by name. It should be noted that amendment of the Total Design Plan would require amendment of the Comprehensive Plan and of San Francisco Bay Plan of the State of California, as the Total Design Plan has been incorporated into that plan which is state law. Amendment of the Comprehensive Plan must be proposed by the Department of City Planning and approved by the Planning Commission. The latter would then recommend amendment(s) in the

Total Design Plan to the BCDC for consideration through its Bay Plan amendment procedures. Appendix H, p. A-128, contains potential plan amendment language to allow the project.

The project would respond to planning and policy goals by rehabilitating and restoring historic buildings; providing open space: increasing public access to the waterfront; returning some pier area to open water; providing commercial recreational uses along this portion of the waterfront; removing surface parking and parking over water and providing offices on Pier One as designated in the Total Design Plan and the Northeastern Waterfront Plan. Offices are not permitted on new fill, including replacement piers, according to the Special Area Plan.

The project would differ from planning and policy goals in its proposed amount, mix and location of land uses and public spaces. For the site area as a whole, the project would provide 1,000 more square feet of office space, 38,100 more square feet of commercial/recreation space, and about 55,000 more square feet of open space than called for in the Plans. Certain recommended uses (such as a visitors' center) would not be provided. Certain public open spaces would be of a different size, configuration and/or location than specified by the Plans. Specific differences between plan policies and the proposed project are described, by building, below and in Table 11 (p. 90-94). Specific physical environmental impacts of plan amendments are analyzed in subsequent sections of this chapter, by topic. See Alternative D, p. 209, for a discussion of an alternative that would not require plan amendments.

Ferry Building: The proposal for this building would be generally consistent with Total Design Plan and Northeastern Waterfront Plan policies, with respect to restoration, rehabilitation, and design for adjacent open spaces. Proposed uses would conform to existing plans. However, there would be some conflict in regard to distribution of proposed uses by floor, and thus amendments to the Plans would be required. Plans call for commercial/recreation[1] uses on the ground floor, predominantly office use on the second floor, and predominantly office and existing commercial/recreation uses (the World Trade Club) on the third floor. The project would deviate from this in that the second floor would be predominantly commercial/recrea-

tion rather than predominantly offices; the World Club would be relocated to the Agriculture Building; and there would be a new fourth floor of offices, not envisioned in the Plans.

A plan amendment would be required for the proposed semi-circular restaurant that would extend onto the BART platform. This restaurant would conflict with plan policies calling for the platform to remain primarily as open space, with only limited amounts of outdoor commercial uses, such as a cafe. The restaurant would be designed to function as an outdoor dining area at the ground floor in good weather and would be accessible from the BART platform.

The plaza provided in front of the Ferry Building would be smaller than contemplated in the Plans, as a portion of the intended site would be used for service vehicle loading and parking. The Plans do not specify the plaza's size; the proposed plaza would cover about 30,000 square feet.

Agriculture Building: The proposal for the Agriculture Building would respond to planning policies in the Total Design Plan and Northeastern Waterfront Plan calling for public plazas, removal of the 1918 addition to the building, and rehabilitation of the 1915 portion. The project would require amendments to the Plans, because proposed uses would be different than those specified. The Northeastern Waterfront Plan and the Total Design Plan call for 12,000-15,000 square feet of offices and a 2,000-square-foot visitor center. The proposal is for a 12,000-square-foot food hall and 35,100 square feet for the relocated World Trade Club. The impact of the necessary plan amendments would be to change both the type and intensity of use at the Agriculture Building. The sponsors propose commercial use on the ground floor in the belief that it would encourage more public use of the waterfront, the tidal stairs and the Promenade than would offices and a visitors' information center.

The Plans call for a 50,000-square-foot plaza behind the Agriculture Building, once the 1918 addition is removed. The proposed project design would extend the Agriculture Building onto the intended plaza area to accommodate a food hall. About 34,000 square feet of public open space would be provided at the proposed tidal stairs and plaza areas around the building.

Pier One: The project would respond to policies that call for removing parking from the north apron of Pier One and for providing continuous public access around the perimeter of the pier. Plan amendments would be required to remove the pier shed, increase the total amount of allowable office and commercial/recreation space, and to allow the mechanical parking garage as a permanent parking use on Pier One. The Plans call for ultimate development of 145,000 square feet of office space and up to 15,000 square feet of commercial/recreation space for a total of 160,000 square feet at Pier One, and 26,000 square feet of public access to the pier aprons. The project would have 161,000 square feet of office space, and 4,000 square feet of commercial/recreation space (a restaurant), for a total of 165,000 square feet of such uses. In addition, about 13,500 square feet of galleria space are proposed, an element not envisioned in either the Total Design Plan or the Northeastern Waterfront Plan. It may be noted that the Plans envisioned retention of the Pier One shed envelope, not a new structure, as now proposed. The planned areas both within the shed envelope and for public access outside it, in comparison with those of the project, reflect this assumption.

The Plans contain policies for interim and ultimate use of Pier One. The proposed plan amendments address ultimate use, as interim parking in the pier shed is not proposed by the sponsor. The impact of the proposed plan amendments for Pier One would be to make more intensive use of the pier a matter of planning policy. The amount of allowable office space would be increased by 16,000 square feet and the amount of commercial recreational facilities would be decreased by 11,000 square feet from the land use intensity of existing plans. Total developed area on the pier--including the galleria, common areas, and utility spaces--would total 198,000, or 38,000 more square feet than the amount allowed by the Plans. Open space proposed would be about 26,000 square feet on perimeter aprons and in a plaza between the bulkhead and the new building.

Table 11

RELATIONSHIP BETWEEN THE PROJECT AND POLICIES OF THE TOTAL DESIGN PLAN (TDP) AND THE NORTHEASTERN WATERFRONT PLAN (NEWP)

Land Use Policies	Project Plans
GENERAL OBJECTIVE 1:	
Policy 1: Accommodate where appropriate additional activities which will strengthen the predominant economic functions of each subarea of the Northeastern Waterfront. (NEWP, p. 10).	Land use within buildings is 82% office and 10% restaurant/retail. The proposed use would be about 67% office and 32% restaurant and retail. Some maritime uses are now present on-site, some would remain. A world trade center is proposed for Pier One.
Policy 2: Consistent with other policies of this Plan, encourage uses on Port property which return revenue to the Port to support and improve its facilities. (NEWP, p. 10).	Gross revenue from the project to the Port by 1990 would be about $4 million, compared with present site revenues of $2 million./1/
GENERAL OBJECTIVE 2:	
Policy 2: Diversify activities to encourage the use of the Northeastern Waterfront by a broad spectrum of the population. (NEWP, p. 10).	Proposed land uses for the site include retail, office and restaurants. Public spaces include gallerias, atrium, tidal stairs, plazas, and walkways. These uses would include free activities in addition to commercial ones; goods and services probably would be available in a variety of price ranges.
Policy 3: Encourage land uses having different peak periods of activity within each subarea of the Northeastern Waterfront to contribute to the area's diversity, to expand the period of use, to decrease peak period traffic congestion, to facilitate efficient use of the transit system and to preserve and enhance the environmental quality of the waterfront. (NEWP, p. 10).	Retail, office and restaurant uses each have different transportation peak hours. Offices have morning and evening peaks; retail peaks occur mid-morning and restaurant peaks occur at noon and in the evening. At least one restaurant would operate 24 hours a day, which would provide a service not now available for late ferry commuters. The proposed restaurant and retail uses could have the same use patterns and peaking characteristics as Fishermen's Wharf and Pier 39.
Policy 4: Give priority to the development of public open space in any non-maritime development adjacent to, or over, the water. (NEWP, p. 10).	Public open space would be about 167,700 usable, walkable square feet compared to an existing 79,100 square feet. The project would improve existing and planned open space.
Policy 5: Emphasize water-related recreation Bay-oriented commercial recreation and Bay-oriented public assembly uses in non-maritime development adjacent to, or over, the water. (NEWP, p. 10).	Among these uses, according to the NEWP, are restaurants, cafes and specialty shops, all of which would be included in the project. Passive recreational areas would increase use of the waterfront, restaurants would overlook the Bay, small craft mooring and ferry service would serve water-related recreation. Fishing would continue to be allowed on site.

[1]This reflects existing leases with the Port, which do not have provisions for cost of living increases. Information provided by Continental Development Corporation, Gwain Prom, Director of Financial Planning, telephone conversation, August 20, 1981. Assumes continuation of current 8% inflation.

Commerce:

Policy 1: Except on new or replacement fill, permit additional office space development adjacent to the Downtown Office District which complements the downtown but which is of a lesser intensity and which reflects the transition between the City and the water. (NEWP, p. 13).	The project would involve new and replacement fill. The Ferry Building and Pier One would contain 308,000 square feet of offices on the 12-acre site, a lower intensity than the Financial District, as all buildings would be four stories or less; small tenants would be encouraged; and one-half the site would be open space.
Policy 2: Encourage service retail uses in combination with other uses. (NEWP, p. 13).	The project would be specifically oriented toward small space users, for both office and retail space. As these types of uses are undergoing relocation pressure due to downtown development, the sponsors feel there is a strong market for leasing small amounts of space, including retail services on the site
Policy 3: Limit general and specialty retail uses in combination with other uses, to that which will not significantly detract from the Downtown Retail District. (NEWP, p. 13).	The sponsors intend to create a tenant mix oriented to international world trade and unique to San Francisco. No major department stores are planned. The specialty retail and restaurant would be limited to 115,000 square feet, according to the Development and Disposition Agreement between the project sponsor and the Port, to minimize the potential for competing with downtown retail facilities.
Policy 4: Permit additional hotel space in locations which would enhance the mixture of uses. In areas where hotels are already concentrated, additional such facilities should be limited and should only be provided in combination with other uses. (NEWP, p. 13).	No hotel is proposed for this site. A hotel was considered by the sponsor and was ultimately rejected because of plans for one at an inland location south of the site. The 806-room Hyatt Regency Hotel is located three blocks from the site at the intersection of Market, Drumm, and California Streets.
Policy 5: Encourage limited additional Bay-oriented commercial recreation and public assembly uses inland of the seawall. (NEWP, p. 13).	The majority of the site is east of the seawall, with limited opportunity for commercial/recreation to the west. A plaza proposed in front of the Ferry Building could encourage public assembly west of the seawall, especially if the freeway were to be removed. Its construction would be the responsibility of the Port, not the project sponsors'.

Site Specific Policies: Agriculture Building

Policy 1: Restore and adaptively reuse the Agriculture Building for office use and possibly a visitor center. Remove, if feasible, the 1918 addition to the building and reuse the original 1915 structure. Create a plaza behind the building. Remove the parking on the platform adjacent to the existing restaurant and allow a limited amount of open air commercial recreational uses which are incidental to and compatible with the open space character of the plaza. If feasible, use wood planking over the deck and illuminate the plaza for night-time activities. Retain the existing restaurant. (NEWP, p. 39 and TDP, p. 9).	The proposal for the Agriculture Building would require amendments to the Total Design Plan, the Northeastern Waterfront Plan and the Development and Disposition Agreement (between the project sponsor and the Port) as the proposed use would include an international food hall and a private dining club. No offices or visitor center are proposed. The 1918 addition would be removed and three facades of the two-story 1915 block would be retained. Major public spaces would be provided at the proposed plaza and tidal stairs southeast of the building. No public plaza is proposed behind the building. Parking would be removed, but Sinbad's restaurant and its easement for valet drop-off and service delivery north of the Agriculture Building would remain. Surface material for the deck would be brick with granite trim, in keeping with pavement material throughout the project, on The Embarcadero Promenade, and on Market Street, rather than wood.

Policy 2: Develop according to the following program:

Office	12,000 to 15,000 sf
Visitor Center	Approx. 2,000 sf
Public Plaza	Approx. 50,000 sf
Restaurant-existing	Approx. 5,000 sf

(NEWP, p. 39 and TDP, p. 9).

The proposal for 12,000 square feet of retail food and the World Trade Club restaurant (35,100 square feet) would require an amendment of the TDP, the NEWP and the Development and Disposition Agreement with the Port. No visitor center is proposed. The existing Sinbad's restaurant is outside the leasehold of the sponsor.

The net difference in use and square footage at the Agriculture Building between the proposed project and planning policies would be:

Office:	-15,000 sf
Restaurant:	+49,000 sf
Restaurant existing:	No change
Visitor center:	-2,000 sf (not part of project)
Public plaza and tidal stairs:	-20,000 sf

See Appendix H, p. A-127 for necessary amendments.

Site Specific Policies: Ferry Building

Policy 1: Restore and adaptively reuse the Ferry Building and develop open spaces adjacent to the Ferry Building in general accord with the "Design Guidelines for the Restoration and Adaptive Reuse of the Ferry Building," dated July 1978. (NEWP, p. 38 and TDP, p. 8).

The project would be in compliance with most of the Page Guidelines; the most important exceptions include not restoring the second floor nave and the double grand staircase. For a discussion of the relationship between the project and the Page Guidelines, see Environmental Impacts (p. 99-109).

Policy 2: Reuse the Ferry Building as follows:

predominantly commercial recreation (shops and restaurants) on the ground floor,

predominantly offices on the second floor,

predominantly offices and existing commercial/recreation/2/ uses on the third floor. (NEWP, p. 38).

There would be ground floor retail and restaurants; second floor offices, retail and restaurants; third floor and new partial fourth floor, offices. The World Trade Club, classified as commercial/recreation, would have the option to remain in the building, although it is proposed to be in the Agriculture Building. The proposed fourth floor was not envisioned in the plans.

Policy 3: Replace dilapidated portions of, and allow a limited extension to the bulkhead wharf between Pier One and the Ferry Building. Remove existing structures and create a plaza. Permit the extension of a glass arcade linking the Ferry Building with Pier One to provide pedestrian shelter, provided it does not block ground level views of the Bay. (NEWP, p.38 and TDP, p.8).

More than an acre of dilapidated fill would be removed between the Ferry Building and Pier One, and replacement fill would be 16,500 square feet. The existing National Car Rental Office would be replaced with a plaza. The architects propose trees between the Ferry Building and Pier One to visually connect the two buildings while maintaining views of the water.

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[2]This refers to the World Trade Club, which is primarily a restaurant.

Policy 4: Develop according to the following program:

Plaza approx. 30,000 sf
Arcade approx. 4,000 to 6,000 sf
(NEWP, p. 38 and TDP, p. 8).

In addition to the 14,000 square foot plaza, a 15,000 square foot plaza would be created between the Pier One bulkhead and the new pier structure for a total 29,000 square feet of plaza area. Trees would be provided on an additional 5,000 square feet at the location recommended for an arcade. No arcade is proposed to connect the Ferry Building and Pier One. Neither is an extension of the bulkhead wharf. The new Bay side wings would extend on piles over now open water.

An atrium and galleria in the Ferry Building itself would contain about 39,500 square feet of indoor public pedestrian space.

Policy 5: Create a plaza for passive recreation use in front of the Ferry Building between Pier One and the Agriculture Building by the removal of parking and the reduction in width to two northbound lanes of The Embarcadero roadway. Design the plaza to create a visual setting for the Ferry Building and a symbolic terminus to Market Street. If found to be feasible after further analysis, extend the California Street cable car down Market Street to the plaza and create a Muni bus stop just south of the east-west axis of the plaza along The Embarcadero. Use street furniture that provides weather protection and install additional ornamental double light fixtures like those presently used along The Embarcadero. (NEWP, p. 39 and TDP, p.6).

Parking would be removed on the west side of site buildings and a 18,000 square foot plaza would be created in front of the Ferry Building. This plaza would be smaller than contemplated in the plans. Adjoining this plaza to the north would be the 14,000 square foot plaza linking the Ferry Building and Pier One, and the 15,000 square foot plaza on Pier One. To the south would be 7,000 square feet of open water between the Ferry and Agriculture Buildings. In all, 66,000 square feet of plaza and open space would be provided at these locations.

Although a portion of The Embarcadero lies within the leasehold, the sponsor has no plans to change the street system. Transit system changes must be implemented by the MUNI and the San Francisco PUC. Street furniture will be provided but has not been designed.

Policy 6: Improve pedestrian access through the Ferry Building between the Golden Gate Ferry Terminal and The Embarcadero. Create a continuous walkway along the eastern side of the Ferry Building of approximately 10,000 to 20,000 square feet that is separate from service vehicle access. (TDP, p.9).

The central atrium would provide direct access through the Ferry Building to the ferry terminal and the roadway. There would be over 20,000 square feet of continuous walkway, separate from service vehicle access, consisting of 2,500 square feet under the pergola at the northeast side of the Ferry Building, 6,200 square feet in walkways north and south of the Ferry Building, and 11,500 square feet at the tidal stairs and plaza.

Policy 7: Allow on the BART platform, immediately east of and related to the Ferry Building, minor amounts of outdoor commercial uses which are consistent with the use of the platform as open space, such as a cafe, outdoor dining and flower vendors. Retain the existing restaurant, plaza and ferry terminal. (NEWP, p.39 and TDP, p.9).

The project would include such outdoor commercial uses as a market and a cafe on the BART platform. The platform would also be used for public events, such as concerts and exhibits. All existing uses would be retained. The proposed semi-enclosed restaurant would extend onto the BART platform.

Pier One

Policy 1: Remove parking from the north apron. Retain and rehabilitate the existing shed. Provide continuous peripheral public access around the water sides of the pier shed. (NEWP, p. 36 and TDP, p. 7).

Parking would be removed from the north apron and continuous public access around the pier would be provided. The shed would be removed, not retained. The deck would be seismically upgraded. The design of the new superstructure would be compatible with the proposed design of the Bay side of the Ferry and Agriculture Buildings. For example, there would be a pergola with paired-columns with the same proportions as those at the Ferry Building. Like the Ferry Building, the new Pier One structure would have a stepped profile. The north facade would have a curved line, recreating the existing line of the shed.

Policy 2: Permit short-term parking to serve the Ferry Building inside the shed as an interim use until inland sites become available within reasonable walking distance of the Ferry Building. Allow a second deck within the shed for interim parking provided it is easily convertible to office use. Permit a limited amount of office, community facility and/or commercial recreation uses to integrate Pier One into the overall Ferry Building development, rather than isolate it as a parking structure. (NEWP, p.36 and TDP, p.7).

The sponsor proposes to provide permanent short-term parking for 375 cars in the Pier One bulkhead building. There would be no interim parking in the shed; it is structurally unsound and cannot support a second deck. Pier One would be integrated with the overall Ferry Building site plan with a common design idiom, plazas, walkways and relocation of the Red and White ferry slip. The latter action would create a view of the pier across open water. No community facilities would be provided. Proposed office space would be 161,000 square feet.

Policy 3: Develop according to the following program:

Interim use (whichever is less);
- Short-term parking within shed
  up to 400 spaces or
  up to 145,000 sf
- Office/Commercial Recreation
  up to 15,000 sf
- Public access-perimeter aprons
  no less than
  26,000 sf

Ultimate use:
- Office, including up to 15,000 square feet of commercial recreation and/or community facilities
  up to 160,000 sf
- Public access-perimeter aprons
  no less than
  26,000 sf

(NEWP, p. 36 and TDP, p. 8).

No interim use is proposed. The proposal is for 161,000 square feet of office and 4,000 square feet of restaurant. In addition, there would be 33,000 square feet of public and common areas, for a total of 198,700 gross square feet.

The net difference in use and square footage between the proposed project and planning policies would be:

Interim Use

Short-term parking within shed:	-145,000 sf or -400 spaces
Office/Commercial Recreation:	+150,000 sf
Public access-perimeter aprons:	No change

Ultimate Use

Office:	+16,000 sf
Commerical/Recreation	-11,000 sf
Public access-perimeter aprons:	No change
Short-term parking within bulkhead building:	-145,000 sf or +400 spaces

For necessary amendments to the Total Design Plan and the Northeastern Waterfront Element, please see Appendix H, p. A-127.

Bay Fill: New platform fill would be required for seismic upgrading and extension of deck areas around the Ferry and Agriculture Buildings and Pier One. Some decking also would be removed, for a net reduction of about 25,000 square feet of deck area. The project would require a BCDC permit prior to construction; the amount of bay fill would be one of the important factors considered during BCDC's review process. In addition to determining whether proposed fill would serve water-related uses, BCDC would need to determine if it would improve public access and shoreline appearance. For a detailed presentation of the amount of fill that would be added and removed by the project, refer to Tables B-1 and B-2, pp. A-35 to A-36, in Appendix B.

The project would remove 1.25 acres of platform fill, primarily between the Ferry Building and Pier One. Consequently, an allowable acre of new fill for this area[2] would not be used. Instead, the existing 64,000 square-foot deck that would be removed would be replaced with about 27,000 square feet of new deck, resulting in 37,000 square feet of additional open water.

The project would use 0.3 of the 0.4 acres of allowable minor fill along the east side of the Ferry Building.[3] The proposed eastward extension of the Ferry Building would be considered fill by BCDC. The restaurant and retail facilities on the first and second floors would be considered water-related uses. The offices proposed for the upper floors would extend over water on new piles and would require BCDC approval.[4] The semi-circular restaurant proposed for the BART platform would require approval and amendment of the Special Area Plan, which states "The BART platform behind the Ferry Building should be used only as a landscaped public plaza, as the site for a ferry terminal, and for the berthing of commercial ships" (p.40, Item 3 of the SAP). The Northeastern Waterfront Plan, Policy 7, p. 39, allows "minor amounts of outdoor commercial uses which are consistent with the use of the platform as open space, such as a cafe, outdoor dining and flower vendors." The Total Design Plan is consistent with the Northeastern Waterfront Plan on this point. There would be a net reduction of 750 square feet of deck south of the Ferry Building.

Relocation of the Red and White ferry slip as part of the project would require new piles which would be considered fill by BCDC.

The proposed extension of the Agriculture Building over the Bay would be considered fill (5,100 square feet) by BCDC and could be approved for a water-related use. The food hall on the first floor would be considered a commercial recreational use and therefore approvable under BCDC policy. BCDC would need to determine if the World Trade Club, a private dining club proposed for the upper floor, would constitute an approvable use.

New piles required to seismically upgrade Pier One would be considered Bay fill by BCDC. Item B(16) of the Special Area Plan states that "small scale offices ... are permitted on existing piers, excluding the BART platform" (p. 39). Therefore, office use on Pier One was envisioned in the waterfront Plans. However, the need for seismic upgrading provided by new or replacement fill was not envisioned in the Plans. According to Special Area Plan policies for the Ferry Building area, fill is permitted only for water-related uses. According to Item B(14) of the Special Area Plan, "offices are not [to be] included in any development on replacement fill" and "offices and residential uses are not permitted on new fill, including replacement piers" (p. 39). BCDC must determine during its permit review process whether world trade center offices proposed for Pier One would be a water-related use; whether the piles needed for seismic up-grading constitute allowable fill (otherwise, amendment of the Bay Plan would be necessary); and whether the project as a whole (including the offices on Pier 1) would significantly improve shoreline appearance and public access to the waterfront.[5]

Land Use Intensity: The project would result in more intensive use of the site and project buildings than is presently occurring in, or planned for, the area. Land use at the site is 60% office, 7.5% retail and restaurant, 6% museum/display/leased storage, and 26% parking. The project would change this land use mix to about 59% office, 28% restaurant and retail, and 12% parking. There would be a net increase of about 96,000 occupied square feet of office space, 47,200 occupied square feet of restaurant and retail food and 63,000 occupied square feet of retail use on the site, resulting in 308,000 square feet of office, 49,000 square feet of restaurant, 66,000 square feet of retail, and 63,700 square feet of parking for the site. In addition, the space allocated to the World Trade Club would increase by 13,100 square feet. The museum/display/storage area would be eliminated.

Zoning: The types of land uses proposed for the site are among those permitted in C-2 districts. According to Section 210.2 of the Planning Code:

> These districts serve several functions. On a larger scale than the C-1 districts, they provide convenience goods and services to residential areas of the city, both in outlying sections and in closer-in, more densely built communities. In addition, some C-2 districts provide comparison shopping goods and services on a general or specialized basis to a city-wide or a regional market area complementing the main area for such types of trade in downtown San Francisco. The extent of these districts varies from smaller clusters of stores to larger concentrated areas, including both shopping centers and strip developments along major thoroughfares, and in each case the character and intensity of commercial development are intended to be consistent with the character of other uses in the adjacent areas. As in C-1 districts, the emphasis is upon compatible retail uses, but a wider variety of goods and services is included to suit the longer term needs of customers and a greater latitude is given for the provision of automobile-oriented uses.

Retail sale of imported goods and various restaurants are intended by the sponsor to exemplify an international theme for the project as a whole. The retail and restaurant facilities are intended to attract a regional, as well as a local, market. The retail and office space would be oriented toward small firms.

The Commerce and Industry Element of the San Francisco Comprehensive Plan states that "The amount of retail space allowed in new developments outside the retail core should be controlled to assure that the strength of the core is not depleted by competing retail centers." (Policy 2, p. 29). According to the Development and Disposition Agreement with the Port, the project would be limited to 115,000 square feet of retail/restaurant uses. (As a comparison, the nearby Embarcadero Center includes about 268,500 square feet of restaurant/retail uses.) The project could draw customers away from the downtown retail core, Union Square. Without further analysis of city wide retail activity and development, it is difficult to quantify the effects with certainty. Other factors such as the increase or decrease of visiting shoppers (tourists and conventioneers) and potential large-scale developments near the retail core (e.g. Yerba Buena Center and proposed offices at Fifth and Market) also would affect the vitality of downtown retail activity.

Section 151 of the Planning Code describes off-street parking requirements, based on use. The site is in the City's Northern Waterfront Special Use District 1, in which off-street parking requirements may be modified by the City Planning Commission, according to Sections 240.1(5c) and 161 of the Planning Code, which recognize policies set forth in the Northeastern Waterfront Plan. The Plan discourages long-term parking on the waterfront and advocates removal of open, surface parking. The Northeastern Waterfront Plan, Objective 1, Policy 5, states:

> Base the determination of the amount of parking allowed for permitted uses on the desirability of reducing automobiles along the waterfront and, to the maximum extent feasible, consider the use of existing public transit and inland parking, as well as public transit and inland parking which could reasonably be provided in the future.

The project would remove 342 long-term spaces and 66 short term spaces on site (408 total) and would replace them with 375 short-term spaces. (See pp. 142-144 of this chapter for a discussion of the project's effect on parking demand in the area.) The project would remove other surface parking and parking over water, in accord with policy recommendations of all three plans for the site. In place of parking would be public amenities which in combination with the retail, restaurant and office uses, would change the character and amount of pedestrian activity in the site area.

Public pedestrian-accessible space outside of existing structures amounts to about 79,100 square feet of the non-submerged site area. The project would provide about 185,400 square feet of pedestrian-accessible space outside structures, a twofold increase. The project would provide an additional 60,400 square feet of interior public gallerias, an atrium and walkways. In all, publicly accessible pedestrian space would equal 245,800 square feet, or more than five and a half acres.

The site is in an area in which special exceptions to the height limit could be permitted under Section 263.2 of the Planning Code to encourage greater flexibility in project design and a gradual stepping down of the height of buildings from The Embarcadero toward the Bay. The only new building proposed for the site, Pier One, would not exceed the 40-foot height limit

recommended in the Total Design Plan, but would be 10 feet taller than the existing shed. The 56-foot height of the Ferry Building would be increased by 4 feet due to the addition of a skylight. Another skylight proposed for the Agriculture Building would be 56 feet at its peak, 14 feet above the existing roof top. The skylight would be 33 feet lower than the permissible 89 feet (84 feet plus 5 feet allowable for the skylight under Section 260(b)1B of the Planning Code), but 16 feet higher than the recommended 40-foot limit. The skylight would be exempted from the height limit, according to Section 260(b)1B of the Planning Code.

Footnotes:

1. BCDC, Special Area Plan No. 1, p. 10: Bay-oriented commercial recreation uses include "facilities specifically designed to attract large numbers of people to enjoy the Bay and its shorelines, such as restaurants, specialty shops, and hotels."
2. Total Design Plan, Policy F.4.a.2, Minor Fills, p. 16, states that "Minor fill to improve shoreline appearance and to improve public access is permitted in the following locations: ...Replacement of part or all of the bulkhead wharf between Pier 1 and the Ferry Building for a public plaza - not to exceed one acre".
3. Total Design Plan, Policy F.4.a.3, p. 16, states that "Minor fill to improve shoreline appearance and to improve public access is permitted in the following locations: ...A public access and service area along the east side of the Ferry Building - not to exceed 0.4 acre".
4. Robert Batha, BCDC Environmental Analyst, letter, March 3, 1982. A copy of this letter is on file with the Office of Environmental Review.
5. Ibid.

C. Historic Resources

Ferry Building Restoration Plans

Restoration guidelines for the Ferry Building are detailed in a 1978 study prepared by Charles Hall Page & Associates.[1] Based on the design of the Ferry Building as it was built, the guidelines analyze building form, site characteristics and interrelationships of site buildings. The Northeastern Waterfront Plan recommends that these guidelines be followed, as does the agreement between the Port and the project sponsor.

Charles Hall Page assessed the impact of the project design in the context of these guidelines[2] for this EIR. Where the proposed design consists of architectural features and spatial relationships not contemplated in the guidelines, Charles Hall Page evaluated the design's compatibility with their interpretation of the origin and history of the Ferry Building design.

Impacts of the proposed design on the Ferry Building as a landmark may be viewed from several perspectives. One is to examine the building as it existed when the entire structure was placed on the National Register of Historic Places in 1978. Then as now, the building retained some original historic materials, elements and spatial characteristics. Some elements, such as the Great Seal of the State of California, retain historic value even though damaged and no longer prominently displayed. Restoring the Great Seal would preserve its cultural associations even if it were placed in another location. Other remaining elements have historic value only in relationship to other original characteristics of the building. The one remaining grand staircase is an example. Blocked off by walls and floors, leading to a hallway rather than the nave, dark rather than skylit, the staircase is no longer grand, although it is the original. The spaces and elements that made the staircase an architectural focus in the early Ferry Building no longer exist. Restoring the original stairs would entail rebuilding one staircase and changing the proposed design so that the atrium would not be open from the ground floor to the roof.

Project impacts also may be looked at with respect to changes over time. Modifications to the north Bay side wing of the Ferry Building have destroyed historic materials and changed the structure's original character and form. New alterations to such areas would impact an addition not original material.

A third perspective from which to view impacts of the proposed design is with respect to the Ecole des Beaux Arts style of architecture which A. Page Brown practiced and in which the Ferry Building was designed. Numerous sketches by Brown indicate how he might have finished the building had he not died prior to construction. One sketch includes two large wings or pavilions at the north and south ends of the Ferry Building, a more typical Beaux Art design than was finally built. (See Appendix C, Figure C-1, p. A-75). Other studies show that Brown also considered glass pavilions at the ends. Some elements such as clathrix (decorative latticework in the windows) were used differently in typical Beaux Arts buildings and drawn differently by Brown than they were finally built in the Ferry Building. Impact assessment in such instances is confronted with a dilemma: the evaluation of removal of an

original element which may have been unintended by the original architect. Would this be an adverse impact? Similarly, would redesign of an element in a manner reflecting the intentions of the original architect and the philosophy of the Beaux Arts genre mitigate an earlier impact? Also, changes in existing alterations to the building for restoration could mitigate the effect of the alteration.

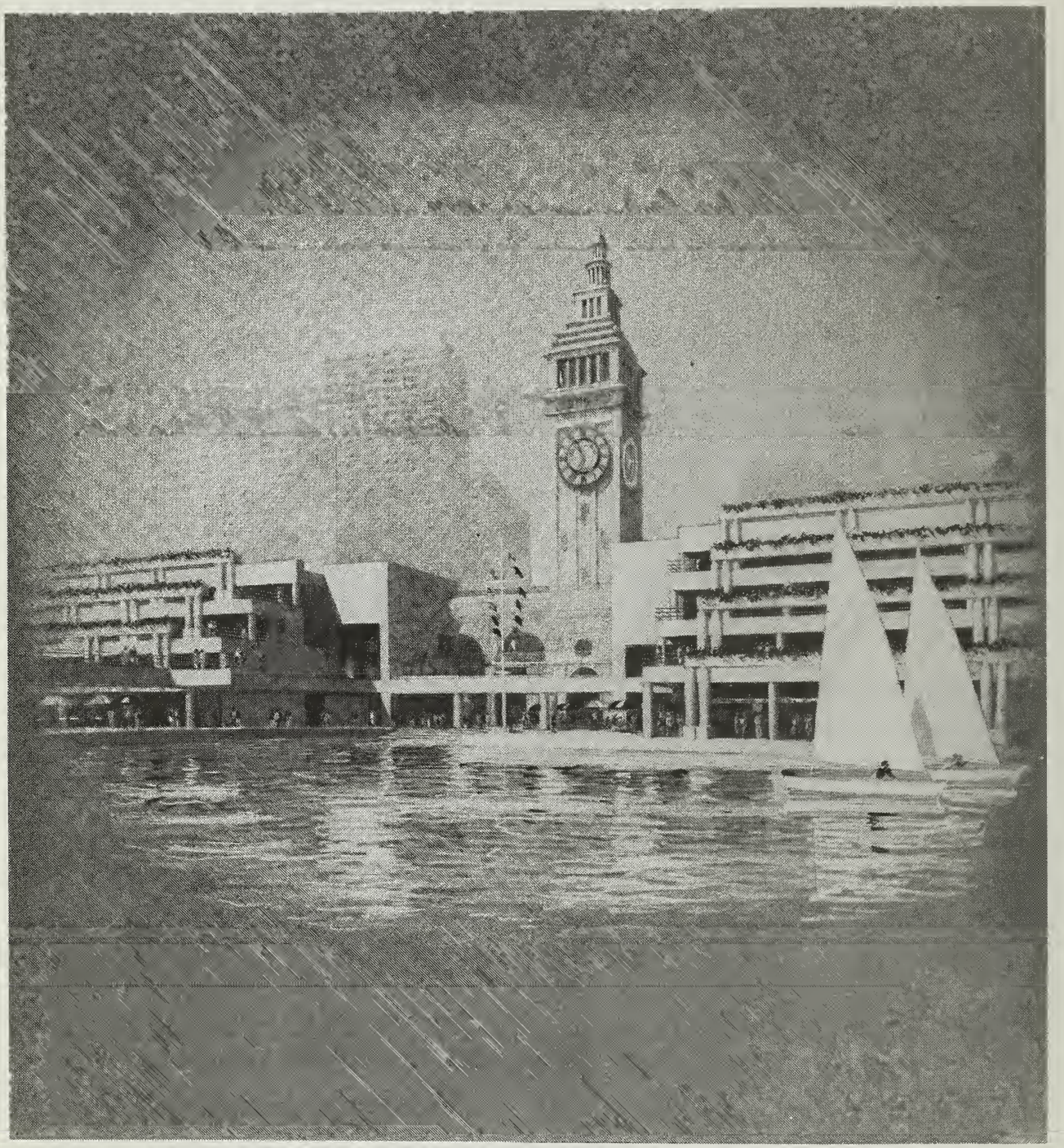
Building Form: Proposed north and south extensions to the Bay side facade would modify the basic architectural form of the remaining parts of the original Ferry Building. The wings would project about 30 feet from the north and south ends of the building and would be visible from The Embarcadero. The Bay side facade would be extended about 40 feet to the east for the length of the Ferry Building. The proposed atrium would separate the building into north and south wings as seen from the Bay (see Figure 25, p. 102). The City side facade would be restored (see discussion below), and the central entry portal would be opened up to increase visual access to the atrium, and to the Bay. The base of the tower would be made visible inside the building, with large archways framing the view of the Bay.

The proposed design would maintain the four longitudinal bays of the original design, but the third bay roof would be raised and a fourth floor added. This would be consistent with the Charles Hall Page guidelines, but the proposed flat roof would not. A flat roof is proposed because a pitched one would cause the fourth bay to be greater in height than the third bay, which would eliminate the original stepped profile of the building. The proposed flat roof would not eliminate the stepped profile, but it would reduce the number of steps.

Additions to the building have affected some of its formal features. The cocktail lounge, canopies, air-conditioners and the World Trade Center sign visible on the City side facade and the boiler room on the Bay side would be removed with the project. The skylight monitors which capped the original building would be restored, and additional skylights would be installed across the full length of the second (longitudinal) bay. The new skylights were found to be consistent with the guidelines.[3]

figure 25

PROPOSED PROJECT
Ferry Building/Bayside View of the Atrium



source: I.M. Pei & Partners, Architects

The Secretary of Interior's criteria for certifying rehabilitation work require that 75% of existing external walls be retained in place as exterior walls. The project would preserve three facades, but these would not equal 75% due to the oblong shape of the building. As reconstruction of the Bay side wall may not be acceptable under the 75% rule, the project sponsor has asked the National Park Service to consider whether preserving three out of the four walls would fulfill the intent of the requirement.

City Side Facade: The Colusa sandstone (dark gray with contrasting grout) on the west facade and the tower would be resurfaced to the original finish and color. The guidelines call for opening up the north arcade. Currently, the arcade is enclosed north of the central portal and open south of the portal. The project would fill in both parts of the arcade. Plain glass would be set ten inches into the archways to create a sense of depth characteristic of a true arcade. This change was found acceptable in relation to the guidelines.[4]

The central entry portal would be modified by opening the three existing center archways which would lead to the proposed atrium. This would involve removing the original ground floor clathri at the south-central arch. The second floor spanning the archway would also be removed. The change is intended by the architects to open up the City side arches, create a grand entry, and increase visual access to the waterfront.

The proposed design would restore the existing decorative muntins (criss-crossed wooden frames) in all but three windows of the City side facade. Where they have been removed, muntins would be reconstructed, primarily in the two northern arches of the entry portal and in 18 arched windows above the north arcade. Existing aluminum window frames would be removed.

North and South Facades: The proposed design for the north and south end facades would differ from the as-built design. The large, arched windows of the original building have been completely removed on the north facade and partially filled in on the south facade. The proposed design would make both facades the same; new arched windows in the second longitudinal bay would be larger than the original fan windows. The remaining upper portions of the

original fan windows on the south facade would be removed. In the third bay, the proposed design shows a series of square windows, which were not part of the original end facades. The architects propose refinishing the end facades in a material and color similar to that proposed for the City side facade.

The guidelines recommend that entrances on the north and south facades be confined to the original arcade areas, while the proposed design would allow pedestrian entry through the large arches at either end of the second bay. These entrances would be located at the ends of the skylighted galleria. This deviation from the guidelines has been found acceptable by Charles Hall Page & Associates.[5]

Drawings by A. Page Brown suggest that he may have intended to design the end facades differently than they were built. A sketch showing one design is presented in Appendix C, Figure C-1 (p. A-75). End pavilions, if originally built, would have visually terminated the building, enclosed the fan windows and longitudinal bays, and made the stepped profile visible only from the water.

Bay Side Facade: As recommended in the guidelines, the Bay side facade of the Ferry Building would be completely reconstructed (see Figure 25, p. 102), as little remains of the original design. The design of this facade is intended to be compatible with the historic nature of the buildings, and has been found acceptable by Charles Hall Page & Associates.[6] This facade would include two wings joined by the proposed atrium. To maintain the horizontal lines of this facade, the atrium would be articulated with a broad beam along the second floor line and horizontal window mullions (frames) would be thicker and heavier than the vertical mullions.

The proposed atrium would be the main Bay side entry, consistent with the central entry recommended in the guidelines. The pergola proposed along the north side of the east facade would recreate the lines, planes and rhythm of the original design. This pergola would reflect proportions of the arcade on the City side and would have paired columns similar to those at the portal fronting The Embarcadero. The proposed pergola would create a sense of depth, similar to the City side arcade and reminiscent of the original Bay

side arcade on the ground floor (see below). Like an arcade, the pergola would frame the view outward. The restaurant proposed for the BART platform and the pergola would result in an asymmetrical Bay side facade.

To improve the appearance of the Bay side facade, the boiler room would be removed and continuous public access provided along the full length of the building at ground level. There would be terraces behind pergolas overlooking the Bay for restaurants and offices at the upper stories.

Interior Spaces: The main public area in the Ferry Building would be on the ground floor where the proposed atrium and the galleria would join. (See Figure 6, p. 17, for floor plans.) The atrium would be the central entrance and would connect The Embarcadero with the Bay. To strengthen this connection, the arches at the central entry portal would be opened by removing the existing cafeteria which occupies the center archway, the existing World Trade Center sign, the ramp inside the building, the first floor clathrix and the remaining southern staircase. These stairs were originally paired with another set north of the center archway, and created a grand staircase leading up to the second floor waiting rooms. The original open space containing the stairs was walled off during the 1950s. The proposed project would include a modern grand staircase in the atrium, which would provide views of the water from the second floor level. The murals along the interior ramp would be removed along with the ramp.

Throughout the atrium and galleria, the full height of the building would be "open" to the sky through the proposed skylight. The galleria is intended by the architects to evoke the nave which originally ran the length of the building and which extended vertically from the second floor to the roof. The original steel trusses would be restored; those trusses which were affected by the 1906 earthquake would be replaced by facsimiles; all trusses would be exposed. Ornamental brick would be repaired, or reconstructed where missing.

Up to four pedestrian bridges would cross the galleria at the second and third floors. About 30% of the existing original second floor terrazzo flooring[7] would be removed to create the galleria, and the mosaic Great Seal

of California would be relocated to the center of the first floor atrium. Structural engineers for the project recommend removal of all of the floor material, as heavy masonry is hazardous in an earthquake.[8] About 4,000 square feet of marble on the walls of the second floor hallway and the grand staircase area would be removed for the galleria.

Project plans anticipate intensive public use of the second floor, which would contain retail and restaurant spaces and the galleria. As recommended in the guidelines, finish material for the second floor would be durable and neutral in color. There would be seating areas on semi-circular shop roofs, reminiscent of the original use of the second floor as waiting areas.

The proposed design would be a departure from the original interior spaces which included service areas, a baggage room and minor waiting rooms on the ground floor. The second floor was the activity center of the building because ferries were loaded from that level and unloaded at the ground level. The proposed project places primary emphasis on the ground floor in order to make a strong connection to Market Street, the Bay, the Agriculture Building, and Pier One. The sponsor and market consultants believe that these ground floor conditions are best suited for the proposed retail activities.[9]

Other Design Features: Restoration of the existing skylights and the addition of new ones would result in glare impacts if the original angle of the glass were maintained. The architects prefer to maintain the original slope of the roof and skylights, as glare impact would be of limited duration on days when it would occur. (See p. 129 of this chapter and Appendix D, p. A-77, for a discussion of glare effects.)

The Ferry Building campanile would not be open to public use, as proposed in the guidelines, because there is not enough area in the shaft to install both stairs and an elevator. The San Francisco Building Code requires that buildings above two stories in height provide at least two ways of departure.[10] Consequently, the clockworks inside the campanile would not be made visible to the public. This would conflict with the guidelines.

The architects propose to light the building exterior with small bulbs, outlining the tower and four facades, similar to the way in which the Ferry Building was decorated for the 1915 Pan American Exposition. This would vary from the use of floodlights proposed in the guidelines. The project's proposed lighting is noted without comment in the Charles Hall Page analysis.[11]

The "Port of San Francisco" sign would be retained, as recommended in the guidelines; no other signs are proposed for the building facades. The guidelines recommend that exterior signs be permitted if design criteria have been established.

Urban Design and Site Relationships: The policies of the Total Design Plan, the Northeast Waterfront Plan and the Charles Hall Page design guidelines include a number of urban design recommendations for areas and facilities outside the project sponsor's leasehold. These recommendations would have to be approved and/or implemented by various public agencies. (See Mitigation Measures, pp. 188-189.) For example, the guidelines and the Northeastern Waterfront Plan recommend removal of physical and visual barriers between Market Street and the Ferry Building. This could be done by removing The Embarcadero Freeway, concrete and earthen walls west of the Ferry Building, two rows of trees and concrete bollards at Embarcadero Plaza, four rows of parking spaces under The Embarcadero and cyclone fences around long-term parking spaces operated by the Port.

A major public plaza in front of the Ferry Building is proposed in the Northeastern Waterfront Plan. If built, this plaza could improve public access to the site and shoreline appearance, and make the Ferry Building appear more prominent, particularly if the plaza were constructed in combination with removal of the freeway. This proposal would require realignment of The Embarcadero in front of the Ferry Building and could be accomplished through joint action of public agencies. (See Mitigation Measures, p. 189.) The plaza area lies outside the project sponsor's leasehold and is not proposed in this project.

The project would return the area south of the Ferry Building to open water by removal of existing parking and platform fill, which would improve the visual quality of this area. Trees proposed for containers in this area would visually terminate north and south ends of the Ferry Building arcade and buffer pedestrians from street traffic. Trees are also proposed for the area north of the Ferry Building. Trees would be more transparent than the arcade recommended in the guidelines and would be pruned so as not to interfere with views. As recommended in the guidelines, a common paving material such as brick with granite trim would be used throughout the site area and inside the galleria.

Agriculture Building Restoration Plans

The sponsor proposes to retain the north, west and south facades of the two-story, 1915 portion of the Agriculture Building which fronts on The Embarcadero due to structural and settlement problems. The 1918 portion of the building would respond to Total Design Plan and Northeast Waterfront Plan policies and Charles Hall Page guidelines for the Agriculture Building.[12] A new, partial third floor would be added within the existing building envelope, for the World Trade Club. An entirely new internal structural system and roof would be built, conforming to the original massing of the two-story block. Thus, the project would save the most visually and architecturally significant parts of the original structure.[13] The loss of historic resources would be confined largely to one facade as the interior has been remodelled many times, and little original detail remains other than the staircase. A Bay side addition would be built in a style, color and material similar to the portion that would be retained. Separating the two parts would be the skylighted galleria. The Bay side addition would conflict with Total Design Plan and Northeast Waterfront Plan policies which call for a plaza behind the Agriculture Building.

Alternative B-2, pp. 205-207 , discusses other approaches for preserving or restoring the Agriculture Building. The project sponsor's approach to rehabilitation would be determined after further structural studies and consultation with public and private preservation agencies and organizations. The sponsor would make a decision based on cost, safety and preservation merit.

Pier One Restoration Plans

The bulkhead building of Pier One is one of three, similarly styled wharf buildings north of the Ferry Building. The peaked roofs of Piers One, Three and Five are connected by two-story, flat-roofed bulkhead buildings. The project would not affect this connection. The City's 1976 Architectural Inventory describes the bulkhead as a "Classical Root Renaissance Style" building. Views of these buildings would be a dominant urban design element on the waterfront; however, they are blocked by the freeway. The proposed project would preserve the bulkhead building and remove the shed behind it; the shed has no known historical merit. The bulkhead would be repaired and resurfaced on the exterior. The interior would be gutted, and a mechanical parking structure would be installed inside it. This would involve modifications to the west side facade (cutting openings for cars to enter and exit) and extension of the bulkhead building about 20 feet to the east.

Removal of the pier shed would require an amendment to the Northeastern Waterfront Plan and the Total Design Plan. Architectural and historical merit of the shed have not been noted. The project would have no impact on other historic or architecturally meritorious buildings in the site area.

Footnotes:

1. Charles Hall Page & Associates, Design Guidelines for Restoration and Adaptive Reuse of the Union Depot & Ferry Building, 1978, prepared for the San Francisco Port Commission.
2. Charles Hall Page & Associates, Proposed Plans for the Ferry Building and Their Consistency with the Design Guidelines for Restoration and Adaptive Use of the Union Depot & Ferry Building, Technical Memo, July 1, 1981, revised August 1, 1981. A copy of the complete memo is included as Appendix C of this report, pp. A-37 to A-76.
3. Ibid, p. A-59.
4. Ibid, p. A-46
5. Ibid, p. A-52.
6. Ibid, A-48 to A-50.
7. Terrazzo is a flooring material made of marble chips set in cement, then ground and polished after setting.
8. Joseph Buel, Civil Engineer, State of California license 26129, Peter Culley Associates, telephone conversation, August 13, 1981.
9. Keyser-Marston Associates, Market Study for the Ferry Building Complex, July 1981, on file at the Office of Environmental Review.
10. San Francisco Building Code, Article 33, Section 3302.A.1.
11. Appendix C, op. cit., p. A-60.
12. Ibid, p. A-70.
13. Ibid, p. A-71.

D. Archaeology

The potential for encountering cultural resources during construction on-site is expected to be limited. Artifacts or other cultural resources at the ends of the early piers, that might have survived, would be expected to be either everyday items such as clay pipes and potsherds (broken pieces of pottery) discarded or lost from the piers or from vessels tied at them; or the remains of vessels burned or sunk. There is no known record of the latter category at this site.[1] Everyday items were probably abundant in and on the Bay mud at this location prior to filling and dredging of the waterfront. They would probably have been disturbed, destroyed or buried from construction of two seawalls.[2]

Fill materials are unlikely to contain cultural matter as they consisted of quarried rock and dune sand; the sand came from a sparsely populated portion of the City, south of Market Street.[3] Recent archeological testing of core samples taken from locations just west of the site yielded no finds of demonstrable importance.[4] A program of archaeological testing under The Embarcadero from the Jackson Square area to Hunters Point, including areas immediately adjacent to the site, was conducted in 1978 for the San Francisco Clean Water Program. Investigations immediately west of the Ferry Building recovered limited quantities of cultural objects such as glass, ceramic and metal; they were not considered significant finds. It may be possible that an isolated and unexpected find could be made; however, to date archival and archaeological research have not identified any cultural materials meriting additional study or preservation.[5] See Mitigation Measures, p. 187, for procedures which would be followed in the event that any archaeological discovery is made during construction.

Footnotes:

1. Harlan Soeton, Historian, San Francisco Maritime Museum, interview, June 17, 1981, conducted by Dai Williams, M.A.
2. Ibid.
3. Olmsted, et. al., Yerba Buena Convention Center: Report on Historical Cultural Resources, November 1977, p. 234. A copy of this report is on file with the Office of Environmental Review, in file 77.220, Yerba Buena Center EIR.
4. Allen Pastron, Ph.D, Archeo-Tec, letter dated August 12, 1981, page 2. This letter is included as Appendix E, p. A-80.
5. Ibid.

E. Public Access, Recreation and Open Space

Planning and Policy Requirements: Policy for public pedestrian access to the waterfront in the site area is given in the general and site-specific guidelines of the Total Design Plan,[1] the Northeastern Waterfront Plan, the Special Area Plan No. 1, as amended, the San Francisco Bay Plan and the McAteer-Petris Act.

General policies of the Total Design Plan call for continuous pedestrian access ways along the waterfront for walking, viewing and fishing, except on maritime piers (pp. 1-2). Public access is to be improved through such actions as removal of dilapidated piers and exposed surface parking, and waterfront open space is to be sheltered from the elements. Site specific open space and access policies are presented in the plan (pp. 7-9 for Pier One, the Ferry Building and the Agriculture Building) and are summarized and discussed in Table 11, Relationship Between the Project and Policies of the Total Design Plan and the Northern Waterfront Plan, pp. 90-94.

The Special Area Plan states that one-half of the pier area (excluding the BART platform) is to be walkable public recreation area, open space, and public access, unless, as part of the Total Design Plan for the area, it is determined by the San Francisco Board of Supervisors and the Bay Commission that private development cannot provide all of the fifty percent (50%) walkable area and at the same time yield a reasonable return both to the Port and the developer, and that public or private funds are insufficient to provide the remaining walkable open space (Policy 1.b.1, p. 35). The Special Area Plan defines usable walkable open space as that which is located at ground or platform level, is open to the sky, is open to the public without charge, and does not include areas devoted to parking or regular vehicular use. Minor variations in elevation can be permitted, and some covering of open space can be allowed, if it serves public areas and does not support structures . Roof top and interior open areas can not be considered part of the required open space (p. 37).

The relationship between specific Northeastern Waterfront Plan policies for open space and public access and the project is presented in Table 12, p. 113. This plan also calls for continuous public pedestrian access as well as open space and water-oriented recreational opportunities at the waterfront for residents and visitors of all income groups.

The Project in Relation to the Policies: The project would be consistent with Total Design Plan, Northeastern Waterfront Plan, and Special Area Plan goals of providing public access in the Ferry Building area. Table 13 (pp. 114-115) identifies existing and proposed areas publicly accessible to pedestrians; Figures 26 and 27 (pp. 116-117) show the location of existing and proposed public access, respectively. All existing surface parking, chain-link fences and on-site barriers would be removed. The two proposed tidal stairs would provide passive recreational use and pedestrian access to the water. The southern tidal stairs would connect the project to The Embarcadero Promenade, which runs the length of the waterfront between the Agriculture Building and Pier 24. The northern tidal stairs would enable pedestrians to walk across the Pier One plaza to Pier 1-1/2 and eventually to Pier 3, where the Port plans public improvements for a recreational pier. Public pedestrian access would be provided throughout the galleria and food hall in the Agriculture Building, the galleria and atrium in the Ferry Building, and the galleria and public display areas in Pier One.

Three types of publicly accessible space would be provided on site: (1) space that could meet the BCDC criteria for publicly accessible usable, walkable open space, as defined in the Special Area Plan; (2) outdoor space that would not meet the BCDC definition; and (3) indoor space. That is, certain areas might not meet BCDC criteria but would be available to the public. The BCDC staff and Design Review Board would evaluate the proposed project to evaluate its conformance to the agency's public access design guidelines at the time of permit review.[2] All of the project's paved outdoor areas would be accessible to pedestrians.

Table 12

RELATIONSHIP BETWEEN THE PROPOSED PROJECT AND THE NORTHEASTERN WATERFRONT PLAN: PUBLIC ACCESS, RECREATION AND OPEN SPACE

Policy 1: Develop recreation facilities attractive to residents and visitors of all ages and income groups. (NEWP, p. 14).	The plazas, tidal stairs and pergolas would provide passive recreational use. Fishing would be allowed along piers and decks. Proposed public spaces in the food hall of the Agriculture Building, the atrium and galleria of the Ferry Building and the galleria of Pier One would provide a range of spatial and commercial recreational experiences for the public.
Policy 2: Provide a continuous system of parks, urban plazas, water-related public recreation, shoreline pedestrian promenades, pedestrian walkways and street greenways throughout the entire Northeastern Waterfront. (NEWP, p. 14).	The project would provide continuous pedestrian access to the waterfront throughout the site, linking off-site pedestrian promenades to the north and south. Parking would be removed from the site, creating new pedestrian spaces.
Policy 4: Encourage and provide open space and public recreation facilities as part of any development, to provide facilities for people residing and working in the Northeastern Waterfront and in adjoining neighborhoods. (NEWP, p. 14).	The food hall, open air market and outdoor sitting spaces such as the tidal stairs would provide outdoor facilities for nearby workers and residents.
Policy 6: Require the inclusion of a substantial amount of public open space and peripheral public access to the water's edge in any non-maritime development beyond the seawall.	Public access along the water's edge, no less than 15 feet in width, would be provided at ground level throughout the site except along the northern edge of the BART platform. Here public pedestrian access would continue on an elevated walkway, connected to the second floor of the Ferry Building and the tidal stairs. 47% of site would be publicly accessible.
Public access should be located at ground or platform level, but minor variations in elevation intended to enhance design of open space may be permitted.	
Public access should also be open to the sky, although some covering may be allowed if it serves the public areas and does not support structures.	About 17,700 square feet (9.5%) of public outdoor space would not be open to the sky due to building overhangs. The pergolas (about 13,100 square feet) would be open to the sky and would provide a unique, varied pedestrian experience.
Particular attention should be given to the provision of perimeter public access along the platform edge. (NEWP, p. 14).	See discussion of Policy 6, above.
Policy 8: Exclude small boat marinas from the Pier 7 to 24 area, (but allow transient mooring in the Pier 14 to 24 areas). (NEWP, p. 16).	No marinas are proposed. Transient mooring is proposed north of Pier One.
Policy 9: Develop a continuous bicycle path along the Northeastern Waterfront, separated and protected from vehicular traffic where possible, and linked with the Citywide bicycle route system. (NEWP, p. 16).	No bicycle path has been designed within site area.

[1]These policies are similar to those in the Total Design Plan, adopted by BCDC, the Port of San Francisco, the City Planning Commission, and the Redevelopment Agency.

Table 13

AREA PUBLICLY ACCESSIBLE TO PEDESTRIANS:[1]
(In Square Feet)

Site Area

Total site area above water: 12 acres..	522,720
Less areas excluded from lease.....	-70,644
Less net fill removal.....	-54,450
Useable Site Area	397,626

Exterior Public Space

	Existing	Proposed
Ferry Building		
1. Pergola, north wing[2]	-	2,500
2. Walkways adjacent to building, under building overhangs	-	6,200
3. Gangway Through Ferry Building*	600	-
	600	8,700
BART Platform		
4. Open space in lease area	24,500	19,000[3]
5. Elevated walkway over Golden Gate ferry terminal	-	4,000
6. Ramp to Red & White Ferry Slip*	4,000	-
	28,500	23,000
Pier One		
7. Southern Pergola	-	7,800
8. Southern walkway, under overhang	-	6,500
9. East end of pier	-	3,500
10. Walk: north edge of pier	7,500	9,800
11. Entrance plaza, under overhang		5,000
12. Interior walk to north apron*	3,000	
	10,500	32,600
Agriculture Building		
13. Pergola		2,800[2]
Tidal stairs and adjacent plazas		
14. Pier One	-	15,100
15. Ferry Building	-	11,500
16. Agriculture Building	1,300	33,800
	1,300	60,400
Plazas between buildings		
17. North of Ferry Building	8,400	14,000[4]
18. South of Ferry Building	1,800	7,000[4]
	10,200	21,000

*Existing areas to be removed

	Existing	Proposed
Plazas on The Embarcadero		
19. Pier One	-	500
20. Ferry Building	23,500	30,000
21. Agriculture Building	-	1,100
22. Sinbad's public area & walkway	4,500	5,300[5]
	28,000	36,900
TOTAL		
Publicly Accessible Exterior Space	79,100	185,400
Less Areas Under Overhangs		-17,700
Less Areas Closed at Night	-11,100	-
Usable Walkable Open Space	68,000	167,700
Percentage of Site Area In Usable Walkable Open Space	41%[6]	42%
Interior Public Space[7]		
23. Agriculture Building galleria		3,900
24. Ferry Building atrium and galleria		39,500
25. Pier One galleria		17,000
Total Publicly Accessible Interior Space		60,400
Total Public Space, Interior and Exterior		245,800

Footnotes to Table 13:

1. Public pedestrian-accessible areas are all areas on site on which a person may freely walk. Surface areas signed "No trespassing" or marked for parking are not considered pedestrian-accessible. All areas given are outdoors, accessible 24 hours a day except where noted. There is no admission fee for these areas.

2. Total area under pergolas equals 13,100 square feet.

3. Includes 7,500 square-foot area to be used for street market when weather permits and overlaps with 30' x 450' BART vehicular service/delivery easement for Bay Corporation Restaurant.

4. Includes planters and trees:

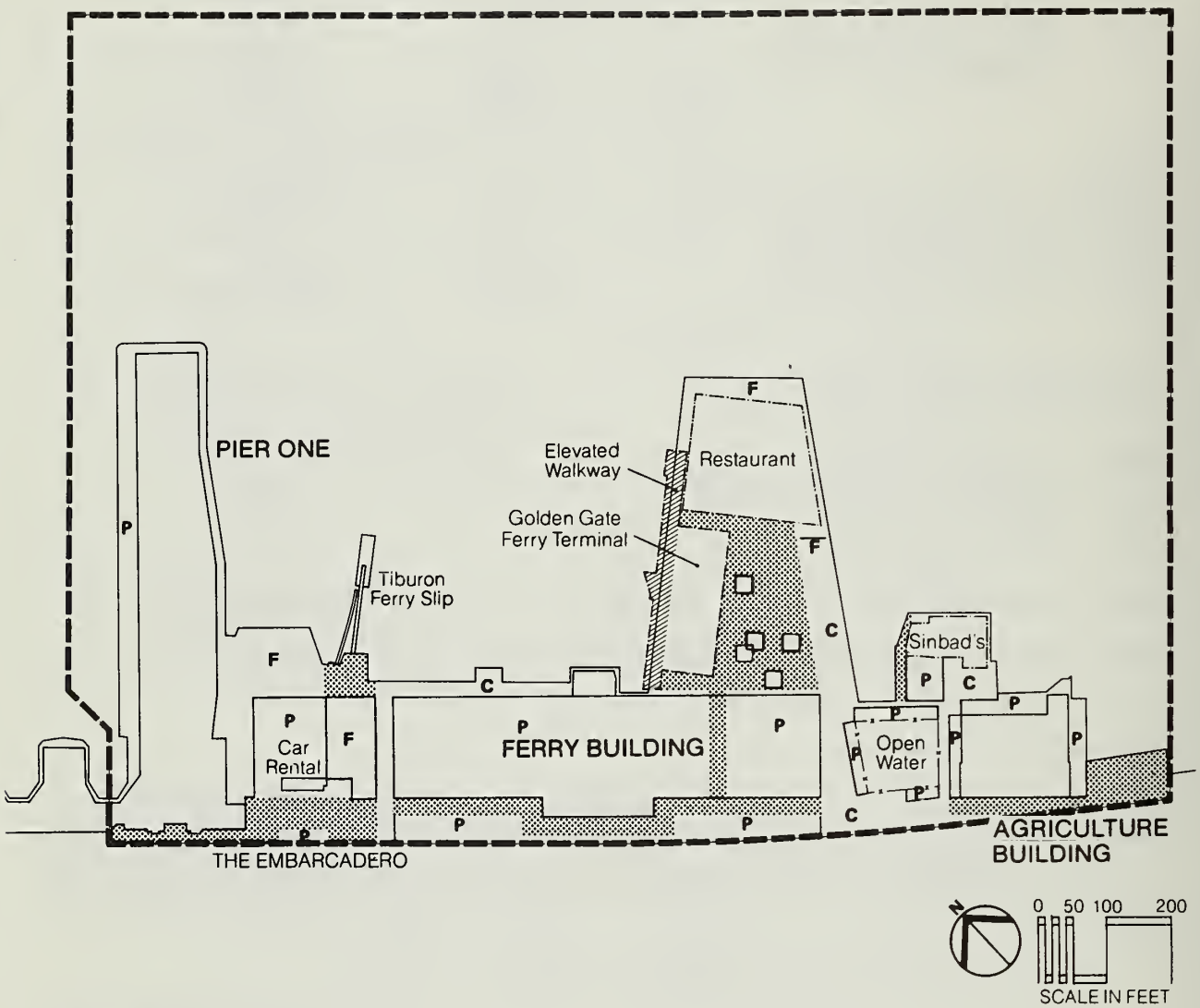
north	6,300 square feet
south	5,200 square feet
total	11,500 square feet

5. Includes vehicular easement to Sinbad's, which accounts for 30% of this area.

6. Existing condition based on 167,500 square feet of hard surface area.

7. Interior areas would be closed after restaurants close.

figure 26 EXISTING PUBLIC ACCESS



LEGEND

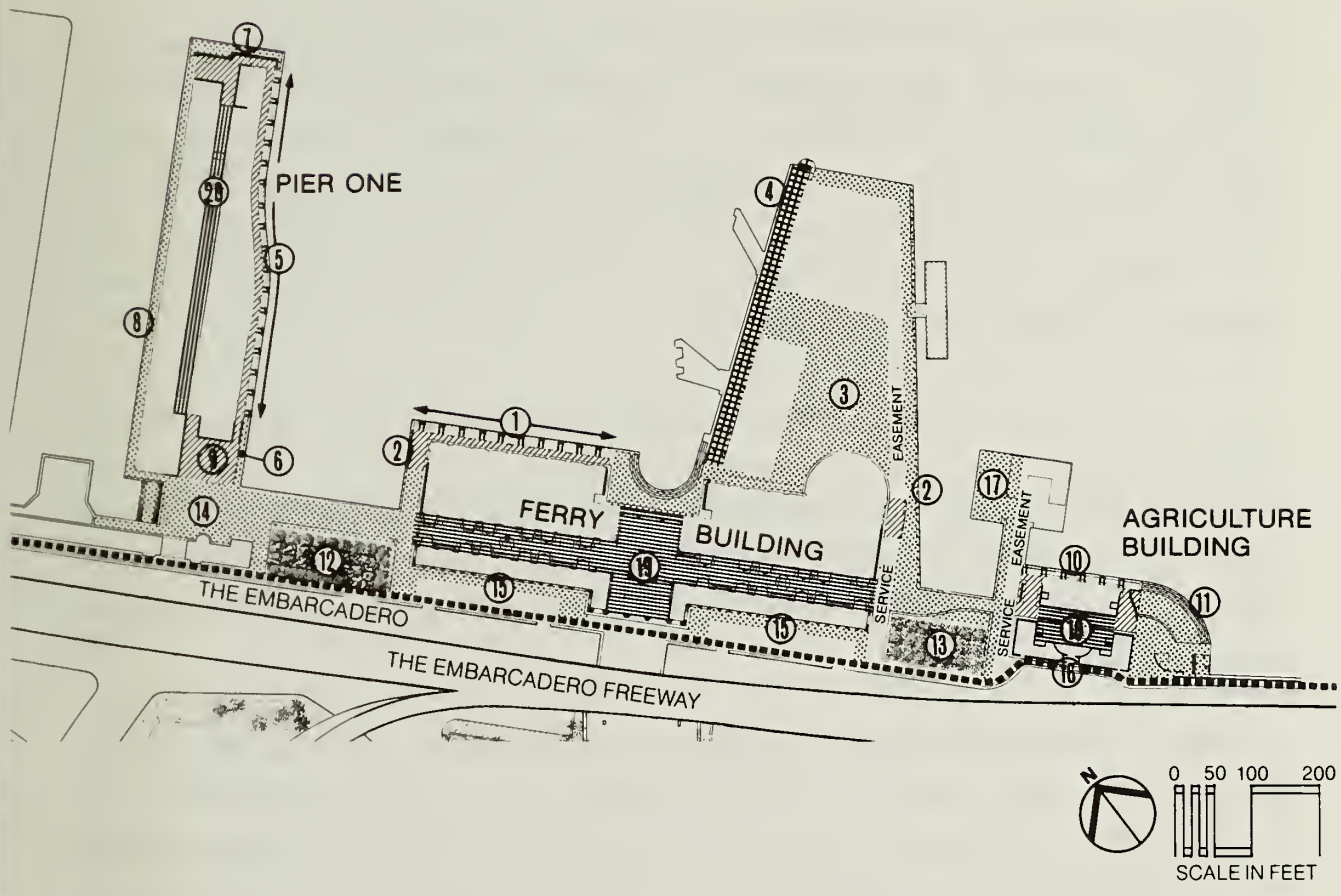
Inaccessible Areas

- **F** Fenced in or barricaded
- **P** Surface parking
- **C** Conflict between pedestrians and service vehicles

- Accessible areas
- Planter with trees
- Property line

source: Planning Analysis & Development

figure 27 PROPOSED PUBLIC ACCESS



LEGEND

(1) Ferry building pergola
(2) Ferry building walkway
(3) BART platform open space
(4) Public pedestrian bridge
(5) Pier One pergola
(6) Pier One walkway
(7) Pier One/public open space
(8) Pier One walkway/public open space
(9) Pier One entrance plaza
(10) Agriculture Building pergola
(11) Agriculture Building tidal stairs
(12) North public plaza
(13) South public plaza
(14) Pier One public plaza
(15) Central public plaza
(16) Agriculture Building public plaza
(17) Sinbad's public area (not part of the project)
(18) Agriculture Building galleria
(19) Ferry Building atrium and galleria
(20) Pier One galleria

Interior Walkways

Exterior Walkways:

Pergola walkways
Plazas, tidal stairs, uncovered walkways
Plaza/walkway with overhang
Embarcadero walkway
Elevated walkway

source: Planning Analysis & Development

The numbers in the following text--(1), (2) and (3)--are keyed to the preceding paragraph.

(1) The project would include about 167,700 square feet of usable, walkable open space that could meet BCDC criteria -- or about 42% of the non-submerged site area, excluding the area covered by buildings, 8% less than the Special Area Plan calls for. This would consist of the open-air market area, 13,100 square feet under pergolas, and open space created by the removal of the car rental office and surface parking. When the market is not in operation, this area would be an open plaza. Table 13, p.114-115, shows the areas included in the 167,700 square feet of open space.

(2) In the second category, other publicly accessible space would include about 17,100 square feet of area under building overhangs, to be located under the elevated north and south wings that would be added to the Bayside Ferry Building addition and adjacent to the Pier One plaza. The area under the wings would be about 14 feet high and 30 feet wide, and thus open to light and air.

(3) The third type of public pedestrian access would be provided throughout the galleria and atrium in the Ferry Building; the galleria and food hall in the Agriculture Building; and the galleria and public display areas proposed for Pier One. An additional 60,400 square feet of public area proposed for the inside of project buildings would bring the combined interior and exterior free public area to about 245,800 square feet.

Some retail and restaurant uses would open onto public areas and could conflict with free public access. The outdoor cafes planned for the east side of the Ferry Building and Pier One could cause conflicts among restaurant operators/patrons and passers-by using adjacent public space. Typically, the public does not feel comfortable or welcome in a seemingly private area, and passers-by tend to feel that they are intruding in a restaurant area if they do not make purchases. Likewise, restaurant operators and patrons might object to the public obviously enjoying without cost that for which the operator/patron has paid. Public access signs clearly delineating restaurants and public spaces could lessen confusion, and architectural design

New open space would be created by removing: the car rental office, platform fill between buildings, and parking areas in front of the Ferry Building.

As the project would generally maintain the existing building envelopes, it would not affect local wind conditions. To reduce the effects of existing windy conditions, the project sponsor would follow the recommendations of wind studies to make open space areas protected and comfortable. Windbreaks would be provided as needed around the Ferry and Agriculture Buildings, and could be designed to include kiosks for newspaper and flower vendors. If needed, the sponsor would provide wind screens in front of building entrances and wind shields for the public space proposed for the east end of Pier One, provided views of the water would not be blocked.

Two vehicle easements traverse pedestrian areas, but are not controlled by the sponsor. A 30-foot-wide emergency vehicle and BART service easement extends from The Embarcadero along the entire southern edge of the BART platform, and is wide enough to accommodate service vehicles for the Bay Corporation Restaurant. Use of this easement by BART and by the Bay Corporation for service and deliveries would conflict with project-generated pedestrian activity, unless deliveries were confined to non-peak pedestrian times. Another conflict between vehicles and pedestrians would occur on Sinbad's platform east of the Agriculture Building. Existing surface parking around the restaurant would be removed under the proposed plan, but valet drop-off and service vehicles would continue to have access along the walkway leading to the restaurant's public deck adjacent to the restaurant.

Footnotes:

1. The Total Design Plan was approved by San Francisco Port Commission Resolution No. 80/4, 1/9/80; endorsed by City Planning Commission Resolution No. 8482, 1/31/80; and approved by BCDC Resolution No. 80-1, 6/5/80.
2. Margit Hind, BCDC Planner, telephone conversation, October 5, 1982; general BCDC criteria for evaluating public access and open space areas in projects are contained in the agency's Public Access Design Guidelines, 1979.

F. Urban Design and Views

Planning and Policy Requirements: Guidelines, policies and criteria to improve visual quality and urban design and to protect view corridors on the site are given in the Total Design Plan, consistent with the Northeastern

Waterfront Plan, The Special Area Plan No. 1, and the Bay Plan. Policies for the site include removal of physical and visual barriers to the waterfront, creation of linkages to inland areas, protection of existing ground level views, and stepping down of building height to the water's edge. The Charles Hall Page design guidelines provide criteria for site plan relationships, and the Urban Design Element of the Comprehensive Plan provides urban design guidelines for major new construction throughout the City.

The Project in Relation to Plans and Policies: The project would respond to most Total Design Plan and Northeastern Waterfront Plan policies for the site regarding visual quality, views and urban design. Differences between project design and these policies include the proposed use of brick rather than wood planking for pedestrian areas, and building additions that would exceed the 40-foot height limit. Tables 14 and 15 (p. 121-126) describe the relationship between the policies of the Total Design Plan and the Northeastern Waterfront Plan and the proposed project. The visual quality of the site area would be improved by building rehabilitation, new paving, landscaping, and the return of some of the site area to open water. Street furniture and signs would be designed in keeping with the character of the Ferry Building.

Urban Design: The relationship between the project and the urban design policies of the Northeastern Waterfront Plan is presented in Table 15, (pp. 122-126). The project would change circulation patterns, views, land uses, landscaping and other characteristics of buildings and open space on site which would also affect the project area. A continuous public pedestrian way would connect site buildings and link a variety of activities, views and experiences. The project would connect the southern and northeastern waterfront, by linking with The Embarcadero Promenade on the south and by way of a proposed plaza, Piers 1-1/2 and 3 on the north.

Views: Figures 28 and 29 (pp. 127-128) describe the views that would be retained or opened by the project. The project would create new street-level views to the Bay along The Embarcadero by removing both surface parking north and south of the Ferry Building and a car rental building north of the Ferry Building. There would be a view through the Ferry Building atrium to the Bay, and through the Ferry Building galleria from the Agriculture Building to

Table 14

RELATIONSHIP BETWEEN THE PROJECT AND THE TOTAL DESIGN PLAN: VISUAL QUALITY, VIEWS AND URBAN DESIGN

Summary of Objectives and Policies	
• Remove physical and visual barriers to the waterfront and create linkages to inland areas. (TDP, p. vii).	The project would eliminate all surface parking on-site, hazardous and dilapidated fill, and the car rental building.
• Provide continuous public access to the water's edge except on maritime piers. (TDP, p. vii).	Continuous public pedestrian access, at least 15 feet wide, would be provided at the water's edge.
• Step building height down to the water's edge, emphasizing the natural features of San Francisco and minimizing the obstruction of views from adjacent areas. (TDP, p. vii).	All three buildings would step down to the water's edge, but a fourth floor addition to the Ferry Building would reduce the number of steps in that building's profile. The fourth floor would not affect building height or views.
• Maintain and enhance views and visual corridors to the water, views to the Bay along the water's edge and opportunities for a variety of viewing experiences. (TDP, p. vii).	Existing views would be maintained and new views of Treasure Island, East Bay, Angel Island, the Bay and the Bay Bridge would be provided from tidal stairs, plazas, promenades and inside the Ferry Building. Views from restaurants, shops and offices would be created in all buildings. New view corridors through and north and south of the Ferry Building would be created.
• Maintain the physical prominence of the Ferry Building and its tower and strengthen its relationship with Market Street. (TDP, p. vii).	The project would restore the facade and tower of the Ferry Building and would create a new plaza linking the site to Market Street. No buildings on-site would exceed the 56-foot height of the Ferry Building.
• Maintain and enhance the historical continuity of the waterfront and preserve structures of historic and architectural significance. (TDP, p. vii).	The Ferry Building, the two-story, 1915 block of the Agriculture Building, and the Pier One Bulkhead would be restored and rehabilitated. A new Bay side is proposed for the Ferry Building. It would be of modern design and would step down to the water.
• Bring the amenity of the Bay inland rather than build out over water to maximize the amenity value of the Bay as an open space resource. (TDP, p. vii).	The project would remove 1.25 acres of fill and not use all of the .4 acres allowed east of the Ferry Building area. Proposed changes in decks and the Agriculture Building tidal stairs would cover some open water, but the project as a whole would result in a total reduction of about 25,200 sf of deck area.
• Balance the location and magnitude of proposed activities with the availability of parking and accessibility. (TDP, p. vii).	The project would create demand for about 460 short-term parking spaces. There are about 3,400 off-street parking spaces available within 1,500 feet of the site (90% occupied during the week). Most major transit systems in the Bay Area are within walking distance.
• Encourage day/night activities and create a sense of security along the waterfront. (TDP, p. vii).	The mixed use concept would result in day and night time activities both during the week and on weekends. The proposed Viennese coffeehouse is planned to be a 24-hour use.
• Improve shoreline appearance and views to the water by removing unsound piers and pile-supported structures. (TDP, p. vii).	1.25 acres of dilapidated platform fill would be removed between the Ferry Building and Pier One to improve shoreline appearance, pedestrian safety, and public access.

Table 15
RELATIONSHIP BETWEEN THE PROJECT AND THE NORTHEASTERN WATERFRONT PLAN: VISUAL QUALITY, VIEWS AND URBAN DESIGN

Urban Design Policy	
Policy 1: Preserve the physical form of the waterfront and reinforce San Francisco's distinctive hill form by maintaining low structures near the water, with an increase in vertical development near hills or the downtown core area. (NEWP, p. 19). The NEWP also recommends a 40-foot height unit for the waterfront area between Piers 7 and 24 (NEWP, p. 23).	The fourth floor addition to the third bay of the Ferry Building would be as high as the 60-foot skylight of the second bay, but would step down to the water at the fourth bay and new additions. Pier One would have a stepped profile where none now exists. The proposed superstructure would be 40 feet high, where the existing shed is about 30 feet. The peak of the bulkhead is about 56-feet. The hipped roof of the Agriculture Building is 42 feet high. A new skylight would increase this by 14 feet, for a total height of 56 feet. From the peak of the skylight, the Bay side addition would step down to about 40 feet followed by an additional 14-foot step down toward the water.
Policy 2: Preserve and create view corridors which can link the City and the Bay. (NEWP, p. 19).	No existing views would be obstructed by the project. (See Figure 40, p. 107.) New views would be created from The Embarcadero to the Bay through the central entry portal and atrium. Removal of parking and other obstructions would open new view corridors. From the end of Pier One, panoramic views of the City and the Bay would be available.
Policy 3: Use continuous planting and other ground surface treatment to physically and visually link the waterfront with adjacent inland areas. (NEWP, p. 19).	Two stands of trees would visually terminate the north and south wing of the Ferry Building and would carry the greenery from Embarcadero Plaza across to the waterfront.
Policy 4: In major pedestrian areas (such as the Fisherman's Wharf and Ferry Building areas), develop generally continuous ground floor retail or other pedestrian-oriented uses. (NEWP, p. 19).	The Ferry Building would have retail, restaurant and public space on the ground floor. Pier One would have no retail, one indoor and one outdoor restaurant, public displays related to world trade and outdoor public space, including small craft mooring. Outdoor restaurant and an outdoor market place are proposed for the Ferry Building and BART platform.
Policy 5: Permit non-maritime development Bay ward of the seawall only if the following qualifications are met: a) Maximum feasible public access is provided to the water's edge. b) Important Bay views along The Embarcadero and level inland streets are preserved and	All of the site buildings are and would be Bay ward of the seawall to some extent. The Ferry Building presently contains many firms which are water-related, a few which are maritime-related. Tenants would be encouraged to return to the site after rehabilitation.

improved. Minor encroachment into the view corridors from level inland streets may be permitted under the following conditions: 1) where the encroaching element has a distinct maritime character, is separated from the shoreline by water, and adds variety to the views along the waterfront; 2) where minor structures (such as kiosks) are desirable to provide public amenities contributing to a continuity of interest and activity along the waterfront. (NEWP, p. 19).	Pier One would be marketed to world trade-related firms, some of which would be maritime- and water-related. Potential tenants include the Port of San Francisco, U.S. Customs, U.S. Coast Guard, trade offices of foreign governments, import-export firms and shipping and freight-forwarder offices. No maritime-related uses are proposed for the Agriculture Building, unless the Port decides to locate there. (a) Approximately 167,700 square feet or 42% non-submerged site area would be publicly accessible, as defined by the SAP and BCDC. An additional 20% of the site would be devoted to other public areas (tidal stairs, galleria, atrium, display areas, etc.). (b) The ends of the Bay side addition to the Ferry Building would extend 30 feet north and south of the existing building. Minor encroachments, such as kiosks, would be included but have not been designed. The proposed trees would have high, open branches and would be pruned to not block water views.
Policy 6: Retain older buildings of architectural merit or historical significance to preserve the architectural and historical character of the waterfront and ensure the compatibility of new development. (NEWP, p. 20).	The Ferry Building, the Pier One bulkhead, and three facades of the 1915 two-story block of the Agriculture Building would be retained and rehabilitated. New construction on Pier One would have a pergola and terraces similar to those proposed for the Ferry Building. They would have paired columns and openings proportioned similarly to the City side Ferry Building arcade. The addition proposed for the Agriculture Building is intended to be of a style, scale, form and material similar to the portion of the building that would be retained.
Policy 7: Maintain the physical prominence of the Ferry Building. (NEWP, p. 20).	No project building would exceed the height of the Ferry Building. Additions to the building would be on the Bay side, with projections from the north and south wings. The architects rejected a glass arcade connecting the Ferry Building and Pier One because that would eliminate the symmetry of the Ferry Building's classical front, in their view. The new design elements in the proposed Bay side addition would change this view of the building and could affect viewers' perceptions of the campanile.
Policy 8: Prohibit new, and remove existing, general advertising signs. Assure that public and private signing contributes to the aesthetic appearance of the waterfront. (NEWP, p.20). **Policy 29:** Prohibit general advertising or commercial signs in any public spaces or attached to any buildings. Allow only attractively designed identification, directional, regulatory or information signs. Permit illuminated signs but prohibit flash-ing or animated signs. (NEWP, p. 22).	No signing plan has been prepared for the project, but the sponsor intends to comply with policies 8, 29 and 30. Placement of public access signs would be coordinated with BCDC.

Policy 30: Employ a uniform system of attractively designed public signs that conform to strict criteria for size, scale, style, and color as part of The Embarcadero roadway improvements from Bay to King Streets and as part of the promenade from Piers 7 through 1-1/2 and from the Architecture Building to Pier 24. Design signs in keeping with the concept of The Embarcadero as a scenic boulevard rather than as a high speed artery. Coordinate signs with those to be used in the Ferry Building complex. (NEWP, p. 22).	Public signs have not yet been designed, but the sponsor intends to respond to this policy.
Policy 9: Encourage the provision of street furniture which is of appropriate design to the historic maritime character of the Northeastern Waterfront. (NEWP, p. 20).	Street furniture has not yet been designed but would be intended to respond to this policy. Street furniture would include seating throughout the site area.
Policy 10: Consider retention of the arched building structures which exist at the main entrance to most piers and which add an important character to The Embarcadero. They should be retained so long as maritime uses exist behind them or when new development occurs which could incorporate these structures without disadvantage. (NEWP, p. 20).	The Pier One bulkhead would be retained and restored.
Policy 12: Remove all or portions of dilapidated piers, bulkhead wharves and bulkhead buildings which cannot be used in order to improve shoreline appearance, Bay views, and access to the Bay. (NEWP, p. 20).	About 1.25 acres of dilapidated platform fill between the Ferry Building and Pier One and between the Ferry Building and the Agriculture Building would be removed, increasing unobstructed Bay surface area. In addition to removing fill, only .3 of the allowable .4 acres of replacement fill for the area east of the Ferry Building would be placed.
Policy 13: Remove exposed surface parking from over water, from under The Embarcadero Freeway, and along The Embarcadero roadway to improve shoreline appearance and access to the Bay. (NEWP, p. 21).	Approximately 180 spaces of exposed surface parking would be removed from the site. An additional 230 enclosed spaces would be removed. 375 spaces are proposed in a mechanical garage in the Pier One bulkhead building. About 250 surface spaces under and around the Embarcadero freeway are outside the project sponsor's leasehold, and probably will remain for the near future. Parking along the roadway would be removed except for spaces to accommodate delivery vehicles.
Policy 14: Design open spaces to maximize sun exposure, wind protection, noise buffering, and to create a sense of security. (NEWP, p. 21).	The stepped building profiles along the water would limit potential afternoon shadow impacts. Two banks of trees are proposed along the western edge of the site. The pergolas would be open to the sky, providing sun exposure, as would the plazas and tidal steps. Pedestrian spaces are generally located on the east side of buildings, and would buffer people from traffic noise from the freeway. The wind screens or shields would be provided for public spaces. The proposed pruning of project trees at eye level and below would aid pedestrian security on-site, as could the proposed mixed-use development.
Policy 15: Use the type of ornamental street lights presently employed along The Embarcadero. Use double fixture lights between Pier One and the Agriculture Building and single fixture lights elsewhere along promenades. Provide lighting sufficient for public safety and avoid glare. Use the same color but lower intensity illumination as that on Market Street. Paint light standards dark blue as on Market Street. (NEWP, p. 21).	The sponsor would comply with this policy.

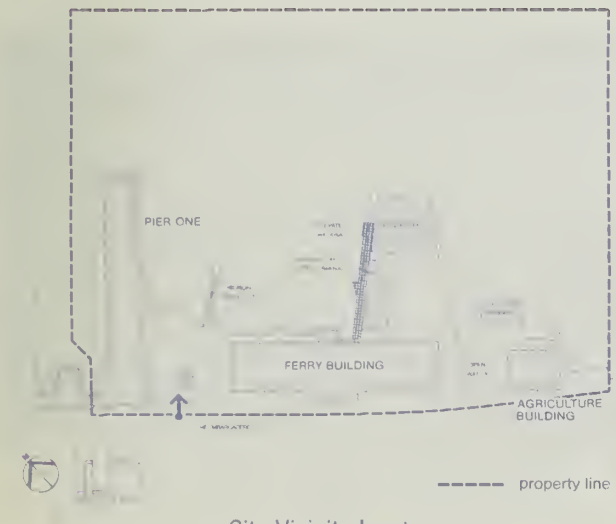
Policy 16: Design and locate a consistent set of street furniture, including such items as seating, drinking fountains, trash cans, signs and plaques along the promenades and public open space piers. Describe the historical significance of the area and the natural resource of the Bay with signs and plaques. (NEWP, p. 21).	Street furniture would be intended to be consistent with these policies. No street furniture design or placement plan has been prepared to date. Historical plaques have been proposed. A history of the site and project buildings is being prepared and would be used in an exhibit in the Ferry Building atrium.
Project 17: Design and locate all landscaping so as to unify and provide continuity among the various areas of the waterfront. Plant a generally continuous row of street trees in the ground along the promenades between Piers 7 and 24. Select trees as part of The Embarcadero improvements from Bay to King Streets which will visually complement the trees along the promenades. (NEWP, p. 21).	No unified landscaping plan has been developed, but the sponsor intends to comply with this policy in the site area and to consult with the Department of City Planning staff to this end.
Policy 18: Select and locate trees, shrubs and ground covers to preserve, dramatize and enhance Bay views for waterfront users. Use plant materials which should have a demonstrated capacity to remain viable, with minimum maintenance under such conditions as frequent high wind speeds, high atmospheric salt content, a high salt water table, and sub-surface fill material with varying drainage capacities. Install trees of at least two inches in diameter and 15 feet in height in the ground. (NEWP, p. 21).	London Plane trees are proposed for the site because they are sturdy, withstand wind, and can be attractively pruned to prevent view blockage and for security. As the proposed location for these trees is partially east of the seawall, they probably would not be planted in the ground or grow to become mature specimens. Existing concrete planters on the BART platform would be removed. These planters would obstruct views and interfere with pedestrian movement Bay ward of the Ferry Building.
Policy 19: On non-maritime piers with sheds, provide continuous pedestrian public access ways of at least 15 feet in width for walking, viewing and fishing. Provide benches and street furniture. Prohibit use of access areas for valet parking, auto drop-off, service vehicles or trash storage, but allow emergency vehicle access. (NEWP, p. 21).	There would be continuous public pedestrian access no less than 15 feet in width throughout the site area. Existing easements across the site for valet parking for Sinbad's and the Bay Corporation restaurants would remain, causing pedestrian/vehicular conflicts. Valet and service vehicles may also interfere with pedestrian space on Sinbad's platform behind the Agriculture Building. Existing service vehicle and trash storage areas would be removed where they create conflicts. Emergency vehicle access along the south side of the BART platform would remain.
Project 20: Provide continuous public pedestrian access to the Bay on the east side of the Ferry Building that is separate from any service vehicle access to the Building. (NEWP, p. 22).	The project would eliminate the existing service vehicle/pedestrian conflict north and east of the Ferry Building. The pergola on the east side of the Ferry Building would then join with a walkway and plaza north of the building.
Policy 21: Provide a variety of treatments where appropriate along the water's edge, including steps and sloped surfaces. (NEWP, p. 22).	Two sets of tidal stairs would be provided at different locations on the site, and the elevated walkway on the north side of the BART platform would be extended.
Policy 22: Pier railings should minimize obstruction of Bay views and reduce maintenance. (NEWP, p. 22).	The design for pier railings has not been detailed, but the sponsor intends to comply with this policy.
Policy 23: Cover pier decks and public access areas with wood planking to the extent feasible to provide an attractive maritime character and a reasonably inexpensive material for pedestrian movement. (NEWP, p. 22).	Pedestrian areas would be covered with bricks, similar to Market Street.

Policy 24: Permit fishing along public access areas on piers and promenades. (NEWP, p. 22).	Fishing would be allowed on the project site.
Policy 26: Restrict development south of Broadway to the Height and Bulk Districts shown on the following map. (Map indicates 40-X for proposed project site area.) (NEWP, p. 22).	The Ferry and Agriculture Buildings presently exceed the 40-foot limit; additions to them would be over 40 feet but no more than existing heights. New construction on Pier One would be 40 feet.
Policy 27: Locate buildings to minimize shadows and wind on public open spaces. (NEWP, p. 22).	The addition to the Ferry Building would be stepped down toward the water, which would minimize afternoon shadow impacts. The project would have no effect on morning shadow patterns. Wind shields on screens would be provided for public places. East of the Agriculture Building there would be open water, so any shadows would not affect public spaces. The stepped profile would reduce potential shadow impacts. There would be no effect on morning shadow patterns. The highest part of the project would not exceed the existing 56-foot-height of the Ferry Building. As Pier One is sited in an east-west axis, there would be little change in shadow patterns around it, due to the project.
Policy 28: Prohibit the use of reflective glass. Use flat glass skylights and discourage the use of dark tinted glass in highly visible areas. (NEWP, p. 22).	New glass would be plain, clear and non-reflective, including skylights. The latter would cause short-term glare impacts on portions of office, hotel and residential buildings across The Embarcadero.
Policy 32: Conceal any mechanical equipment, pipes, ducts and antennas, on roof surfaces. Avoid shiny or highly polished materials on roof surfaces and facades. (NEWP, p. 24).	Although design details have not been finalized, no mechanical equipment would be visible from public areas along the water's edge. Skylights would generate glare.
Policy 33: Enclose all servicing facilities and store all waste within structures so as to be shielded from public view. Prohibit any temporary or permanent exterior storage. (NEWP, p. 24).	Waste disposal facilities have not been designated, but would include individual storage areas for each tenant, and one or two large enclosed collection areas for the properties as a whole.
Policy 34 Preserve the bulkhead buildings and bulkhead arches on Piers 1, 3, 1-1/2 and 24. (NEWP, p. 24).	The Pier One bulkhead arches would be preserved, but the east side would be extended over the water to accommodate the garage. Pier One would meet or exceed energy conservation standards of Title 24. Although the Ferry and Agriculture Buildings are not required to meet Title 24 standards, the sponsor would attempt to comply.

figure 28 EXISTING VIEW



View of car rental building (bay view presently obstructed)



Site Vicinity Inset



Bay view with car rental building removed

source: Planning Analysis & Development

figure 29

PROPOSED VIEWS
(presently not open or easily accessible to the public)



(1) View of city skyline looking southwest from Pier 1



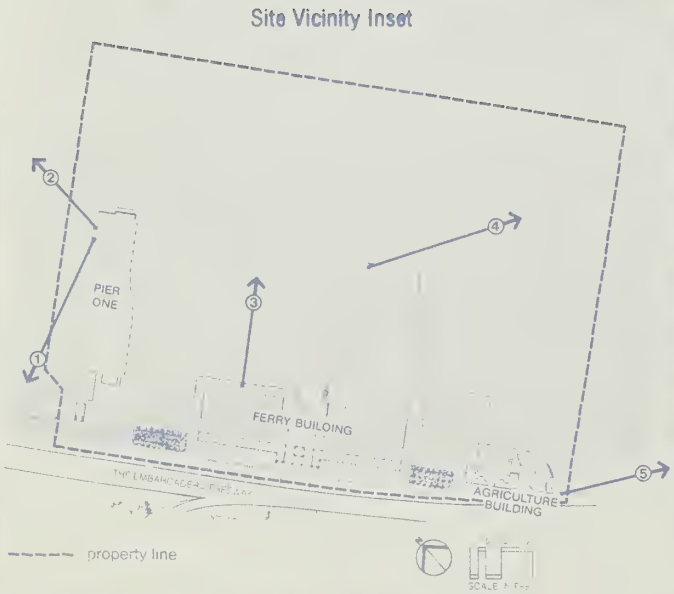
(3) Northeast view of Bay and Treasure Island from rear of Ferry Building



(2) View of Bay and Angel Island looking north from Pier 1



(4) View of Bay Bridge looking east from ferry slip behind restaurant





(5) View of Bay Bridge looking east from promenade (this view is currently accessible)

source: Planning Analysis & Development

the Pier One Plaza. New views would be created from inside the Ferry Building and Pier One. Areas for public viewing would be provided at the east end of Pier One, and views of the City including Telegraph Hill would be visible from Pier One and the BART platform. The elevated pedestrian bridge on the BART platform would be extended east, broadening the view of Treasure Island and the Bay Bridge, presently cut off by the Bay Corporation restaurant. At the Agriculture Building, the tidal stairs would provide views of the Bay Bridge, and pergola walkways would allow views of the water, the Bay Bridge and Treasure Island. Parking would be removed from the north apron of Pier One, enhancing views from this location.

Inside the Ferry Building, views would be available from the proposed grand staircase in the atrium, which on the north side would lead to the outdoor elevated walkway at the second level. Second story restaurants on the Bay side would have water views. Interior spaces in the other buildings would provide similar water views.

The trees proposed for the areas north and south of the Ferry Building would have high, open branches and would be pruned to maximize views. The Red and White ferries, when moored, would block the remaining easterly view from the BART platform, not already obstructed by the Bay Corporation restaurant. The ferry slip would be permanent and would be designed as a low, frame structure that would not impair views. Surface parking under The Embarcadero and the freeway itself would continue to block views of parts of the Ferry Building and, in some areas, views of the water from the west.

Glare: Glare impacts would be caused by the Ferry and Agriculture Buildings' skylights. The pier's skylight would not cause glare, because the east-west orientation of the glass would direct low reflections into the water and high reflections into the sky. The critical periods for glare would be between 8-11:30 AM in June, 8:30-10:30 AM in March and September, and 9-10 AM in December. Glare would primarily affect residents and office workers of nearby high-rise buildings such as Embarcadero and Golden Gateway Centers, and would not affect airplanes or helicopters. Glare effects would be short-term (between one and three hours), lessening as the sun rises higher over the horizon. See Appendix D, p. A-77, for additional information on glare.

G. Transportation

Travel Demand Analysis

An estimate of the amount of travel associated with renovation of the three buildings on the project site has been forecast through an aggregate travel demand modeling process. The model treated the renovation project as an attractor/generator of work and non-work-related travel in the same proportion as the increase in the square footage of office, retail, and restaurant space (see Appendix F for further clarification). Trips were distributed to available modes using modal split data specified by the Department of City Planning (see Table F-5, p. A-97, in Appendix F).[1]

In this and other San Francisco EIRs, a land-use type of approach has been used to estimate employment and the resultant transportation impacts of both the proposed project and cumulative development. An alternative type of approach is to forecast travel demand based upon regional projections of future employment (employment trend approach).[2] Appendix F, pp. A-101 to A-105, contains a discussion of the differences between the two approaches.

The travel from the office portion of the project has been assumed to occur at the rate of 17.5 total (57% work + 43% non-work) person trip ends (pte) per 1,000 net sq. ft. of new office space. (A person trip end is a one way trip.) Travel from the new restaurant and retail portions of the project has been assumed to occur at 100 total person trip ends per 1,000 net sq. ft. of floor space. Based on recent survey data, 45% of the retail and restaurant travel has been assumed to be internal to the project site (i.e. already counted as part of the office travel).[3]

As the project would consist of renovating three existing buildings, the trip generation rates have been applied only to the net change (increase) in occupied square footage of office, retail, and restaurant space (See Table 1, p. 22). Existing travel to the project site has been assumed to continue and has been included as part of the existing conditions. Accordingly, the project would generate approximately 8,460 total person trip ends per weekday. The peak hour of project generation was assumed to occur during the peak period of 4 to 6 PM on weekdays. Twenty percent of the daily (24-hour) office travel and 10% of the daily restaurant and retail travel were

assumed to occur during the PM peak hour. The project would generate about 1,015 person trip ends during the PM peak hour.

A total of 17.4 million gross square feet of new office space is proposed, approved or under construction in the City. Approximately 1.3 million gross square feet of existing office space in the City would be replaced by proposed projects, resulting in a net increase of about 16.1 million gross square feet of office space. This growth, along with 0.5 million gross square feet of net new retail development would generate approximately 48,000 person trip ends during the weekday PM peak hour. Tables F-3 and F-4, in Appendix F, pp. A-92 to A-95, show the projects included in the cumulative analysis for the Ferry Building renovation.

Hotel projects have not been included in the cumulative analyses because hotel uses have different peaking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit. Residential projects have not been included because residential travel in the downtown is generally in the contra-commute direction during peak hours. In addition, the office trip generation rate and modal split distribution are predicated on the assumption that housing would be available in the City. Inclusion of residential projects, therefore, would result in double counting of project-generated travel.

Peak hour travel by mode for the project and the 16.1 million gross square feet of cumulative office developments is shown in Table 16, p. 132. The modal assignments have been made assuming existing travel patterns and do not attempt to predict any modal shift (see Appendix F, p. A-96 for further discussion). As the bridge and freeway system serving the City is currently near capacity during peak hours, the present population of persons traveling by single-occupant automobiles could change in the future. Much of the City-wide peak hour increase might be expected to be accommodated by a shift from single-occupant automobile to ridesharing or public transit.

Table 16
PROJECTED PEAK-HOUR PERSON-TRIPS BY TRAVEL MODE[1]

Modal Type	Projects Under Construction	Approved Projects	Projects Under Formal Review	Ferry Building Project	Total
Auto	6,980	4,600	3,490	160	15,230
Muni	5,480	3,620	2,745	155	12,000
BART	3,700	2,440	1,850	100	8,090
A/C	1,720	1,120	850	30	3,720
SamTrans	250	170	125	5	550
SPRR	940	620	465	25	2,050
GGT	820	540	415	15	1,790
Ferry	180	110	85	5	380
Other	1,480	1,220	970	520	4,190
	21,550	14,440	10,995	1,015	48,000

1. Projections based upon distribution shown in Appendix Table F-5, p. A-97.

Individual projects are listed in Appendix Table F-3, p. A-92. The Ferry Building renovation project has been separated here from the projects under formal review totals shown in Appendix Table F-4, p. A-95.

Transit

The Northeastern Waterfront Plan calls for improved transit services, and a reduction of vehicular traffic in the area.[4] The Muni Five-Year Plan calls for installation of a rail line along The Embarcadero. The Embarcadero "E" light rail vehicle line would run from Fort Mason to the Southern Pacific Depot (SP), connecting the Ferry Building and Fisherman's Wharf, among other destinations. According to the Plan, construction for the E-line should begin by 1983-84.[5] The E-line would replace the existing 32-line which runs between Aquatic Park and the SP Depot. The Muni Plan calls for other transit line extensions that would connect the California Street Cable Car (existing line 61, proposed line 62), motor coach, and trolley coach lines with the Ferry Building. The 3-line, an existing trolley coach line that terminates at Sutter and Stockton Streets, is proposed to connect the site with The Presidio and Geary Boulevard. Two existing motor coach routes, the 25-line which would connect the site to McLaren Park and the 26-line which would connect the site with Glen Park BART Station, are proposed to be re-routed to

serve the site. Both of these lines are under consideration for future conversion to trolley lines.

The Northeastern Waterfront Plan (Transportation, Policy 6, p. 18) calls for improved transit connections in the Ferry Building area to facilitate use of Muni surface lines, Muni Metro and ferries. This could be accomplished by routing Market Street bus lines down Spear, Mission and The Embarcadero to stop in front of the Ferry Building.

During the PM peak hour, the project would generate about 155 trips that would use Muni, about 100 trips on BART, about 30 trips on A/C Transit, about 5 trips on SamTrans, about 25 trips on the Southern Pacific Railroad, about 15 trips on Golden Gate Transit, and about five trips that would use ferries.

Project-generated ridership would increase load factors on all 31 Muni lines serving the site by about .01. (See Table F-6, Appendix F, p. A-99.)

If existing capacities were retained, load factors on BART, AC Transit, SamTrans, and Golden Gate Ferry would increase by less than .01, due to the project. Load factors on the Southern Pacific Railroad and on Golden Gate Transit buses would increase by about .01, due to the project (Table 17, p. 134).

Analysis of cumulative and project ridership on transit lines was based on existing (one hour) capacities. The analysis assumes existing modal split relationships to remain constant and as a "worst case" assumes no expansion in the transit system. Thus, the analysis would not account for increases or decreases in City, State, or Federal funding of transit systems. The estimated transit ridership for the 16.1 million gross square feet of net new cumulative office development and the 0.5 million gross square feet of net new cumulative retail development, estimated ridership for the project, and load factors based on existing capacity are shown in Table 17, p. 134. As all of the transit agencies have Five-Year Plans for improving service, load factors based upon projected capacity (1982-1987) for each transit agency are also shown in Table 17, p. 134.

Table 17

AFTERNOON PEAK HOUR OUTBOUND TRANSIT RIDERSHIP

Agency	RIDERSHIP			LOAD FACTOR (Existing Capacity)[1]			LOAD FACTOR (Proposed Capacity)[2]	
	Existing	Existing plus Cumulative w/o project	Existing plus Cumulative plus Project	Existing	Existing plus Cumulative w/o project	Existing plus Cumulative plus Project	Existing plus Cumulative w/o project	Existing plus Cumulative plus Project
Muni[3]	23,020	30,760	30,920	0.91	1.33	1.34	1.12	1.13
BART								
Transbay	13,600	18,860	18,920	0.90	1.25	1.25	0.76	0.76
Westbay	6,445	9,180	9,220	0.61	0.88	0.88	0.56	0.56
A-C Transit	9,560	13,250	13,280	0.72	0.99	0.99	0.99	0.99
SamTrans	1,700	2,240	2,250	0.78	1.03	1.03	0.36	0.36
SPRR	5,180	7,210	7,230	0.78	1.09	1.10	1.09	1.10
Golden Gate								
Motor Coach	4,510	6,290	6,300	0.66	0.91	0.92	0.73	0.73
Ferry	800	1,170	1,180	0.39	0.57	0.57	0.33	0.33

1. Load factor based upon existing (recommended) maximum capacity. A load factor of 1.00 is equivalent to 100% of recommended seated and standing capacity being used. Recommended maximum capacity is less than "crush" loadings that occur occasionally.
2. Proposed capacity as specified by each agency's Five-Year Plan.
3. 1982 Muni ridership is approximate based on a compilation of Muni ridership by the Department of City Planning.

Source: Frederick Dock, Traffic Engineer

The existing ridership plus project-generated trips and cumulative trips on the 31 Muni lines which stop within 2,000 feet of the site are expected to result in about 30,900 outbound PM peak hour trips.[6] Project-generated ridership during the PM peak hour (155 trips) would be about 1.3% of the ridership from the 16.1 million gross square feet of net new cumulative office development and the 0.5 million gross square feet of net new cumulative retail development (see Table 16, p. 132). Line by line Muni ridership and load factor projections are shown in Appendix F, Table F-6, p. A-99.

Ridership from the projected 16.1 million gross square feet of net new cumulative office development and the 0.5 million gross square feet of net new cumulative retail development would cause demand on most of the affected Muni lines to exceed existing capacity. This would also be the case for BART transbay, Southern Pacific and Sam Trans. As the cumulative demand increases, the length of time of peak loadings would increase, spreading peak-of-the-peak conditions over time.

Currently, Muni lines have excess capacity available during the two hour peak period because the carrier service remains the same during the two hour peak period while ridership is concentrated around the one hour peak.[7] Because some lines only operate during peak hours (e.g. express service) additional capacity to extend the peak period may not be available without adding more runs. (Additional runs may not require increases in vehicle fleet size as the additional runs would be extending the peak period level of service over a longer period of time. Additional runs would cause increases in operating and maintenance costs.)

Assuming that existing funding continues and proposed expansion occurs, the future load factors on the transit agencies would be as shown in the last two columns of Table 17 (p. 134). Muni is proposing to increase systemwide capacity by 19%. Assuming the increase to be provided uniformly, average loadings including ridership from cumulative development would still be over capacity. If Muni does not apply the increase uniformly but rather gives a greater increase in capacity on the lines serving the downtown and a lower increase in capacity on other lines, the load factors would be lower than shown in Table 17 (p. 134).

BART is projecting a peak hour capacity of 16,500 seats transbay (eastbound) and 11,000 seats westbay (westbound). Recommended maximum capacity would be 24,750 and 16,500 respectively. Average loadings, including ridership from the projected 16.1 million gross square feet of net new cumulative development, would not be over capacity with the anticipated Five-Year Plan capacity. AC Transit is not proposing any increases for its transbay service and would therefore be operating at 99% of its recommended maximum capacity with cumulative ridership. SamTrans has a proposed capacity of between 4,800 and 5,000 seats per hour on its San Francisco routes. Recommended maximum capacity would be 6,250 riders. Average future ridership on SamTrans would be below seated capacity with the anticipated capacity. Southern Pacific/CalTrans does not have any proposals to increase seated capacity, but station improvements, including additional parking, are proposed. Southern Pacific would operate in excess of its recommended maximum capacity with the cumulative ridership. Golden Gate Transit is proposing to increase peak period (6-10 AM) motor coach capacity by 25% over existing levels and to increase ferry service through the addition of another Larkspur Ferry (an increase of about 70% over existing service). Average future loadings (including the cumulative demand) on Golden Gate Transit would not exceed capacity with these improvements.[8]

Pedestrian Access and Circulation

The Northeastern Waterfront Plan contains policies to increase public pedestrian access, circulation and use of the waterfront in the site area. These include: improved pedestrian links to the waterfront from inland locations; improved pedestrian movement along the waterfront; continuous public pedestrian access to the Bay east of the Ferry Building separate from service vehicle access; and continuous public pedestrian ways at least 15 feet wide around the periphery of non-maritime piers such as Pier One.[9]

Pedestrian-related policies for The Embarcadero roadway are as follows: (1) widen the sidewalks in front of the Ferry Building to create a major plaza as an appropriate terminus to Market Street; (2) provide a promenade for pedestrians, joggers and bicyclists along the water side of the roadway; (3) provide signalized pedestrian crossings, integrated with transit stops at Pacific, Market, Mission, Folsom, Bryant, Brannan, Townsend, Second, and

Fourth Streets. Establish traffic signals and speed limits which give priority to pedestrian movement across The Embarcadero roadway.[10]

As proposed by the project, pedestrian access to the Golden Gate ferries would be through the central entry portal of the Ferry Building. The minimum effective sidewalk width for access to and from the ferries would be increased from 10 to approximately 25 feet. As the absolute maximum capacity of a Golden Gate ferry established by the U.S. Coast Guard is 725 passengers, pedestrian levels of service through the Ferry Building would be in the impeded range, if all 725 passengers were to exit the facility within a five minute period. Since the Golden Gate Bridge Highway and Transportation District estimates that 555 persons is the practical ferry capacity and since current ferry ridership is less than capacity, the above case represents an extreme condition. The projected pedestrian level of service ("impeded") would improve from the existing, "constrained", conditions by widening the walkway by 15 feet. (See Appendix F, p. A-87, for a description of pedestrian flow rates.)

Removal of 66 on-site metered parking spaces in front of the Ferry Building would allow construction of a 50- foot-wide plaza along The Embarcadero, which would reduce vehicle/pedestrian conflicts. This plaza would extend north and south of the Ferry Building, and tie into The Embarcadero Promenade, under construction between the Agriculture Building and Pier 24. A system of other similar promenades is planned north of the site. Pedestrians traveling north or south along The Embarcadero would use the proposed plaza, or might choose to enter the galleria at various locations throughout the project. Pedestrian impacts on The Embarcadero crosswalk directly in front of the Ferry Building were estimated based on the net increase in daily person trips due to the project after rehabilitation. If all pedestrians generated by the project were to use this crosswalk, approximately 1000 pedestrians would be added to the existing 2,000 during the PM peak hour.

Increased project-generated activity at the Agriculture Building as well as increased activity along the Embarcadero Promenade south of the Agriculture Building would result in increased pedestrian use of the Mission/Embarcadero intersection. This intersection would link the project with the Transbay

Terminal, existing and planned development South of Market Street, and South of Market parking sites. While pedestrian service levels would not reach impeded levels with the project, existing signal timings do not, and would not, provide adequate intervals to insure safe pedestrian crossing of The Embarcadero at this intersection. Impeded pedestrian flow levels are defined as between two and six persons per minute per foot of effective sidewalk width. See Appendix F, p. A-98, for a more thorough discussion of the pedestrian analysis.

Table 18, p. 139, shows expected pedestrian volumes at crosswalks around the site. The morning peak five minutes of pedestrian flow at The Embarcadero crosswalk to Market Street would reach 550, a volume that would result in impeded conditions, given the capacity of the crosswalk. At noon and in the evening, the five minute peak flow would drop to 150-160 pedestrians, conditions that are considered unimpeded. On the east side of the crosswalk in front of the Ferry Building, the peak five minutes of pedestrian traffic would reach 190, between noon and 1 PM, a flow that is considered impeded.

During construction, various parts of the site would be closed to pedestrians, reducing public access to the waterfront. Access to the ferries would be most affected, as the ferry terminal is the most used public facility on the site. However, since access easements for the Bay Corporation restaurant, BART, and the Fire Department would have to be maintained, the walkway and driveway would be large enough to service the ferries. Construction vehicles and trucks would also access the site in these areas, and pedestrian-truck conflicts could occur. This could be minimized by scheduling truck traffic around arrivals and departures of ferries.

Table 18

PEDESTRIAN IMPACTS

Location	Peak Flow Period	Peak 5-Minute Flow	Pedestrian Service Level[1]
The Embarcadero Crosswalk @ Market Street	AM (7:30-8:30 PM)	550[2]	Impeded
	Noon (12:00-1:00 PM)	150[2]	Unimpeded
	PM (5:00-6:00 PM)	160[2]	Unimpeded
The Embarcadero Crosswalk @ Mission Street	Noon (12:00-1:00 PM)	20[3]	Open
	PM (5:00-6:00 PM)	20[3]	Open
The Embarcadero Crosswalk South of Washington Street	Noon (12:00-1:00 PM)	15[4]	Open
	PM (5:00-6:00 PM)	15[4]	
East Sidewalk of The Embarcadero at Ferry Building Entrance	Noon (12:00-1:00 PM)	190[5]	Impeded
East Sidewalk of The Embarcadero at Pier One Entrance	Noon (12:00-1:00 PM)	60[5]	Impeded

Table Notes

1. See Appendix F: Transportation, page A-87, for definitions of pedestrian levels of service.

2. Existing pedestrian volume, plus ferry-generated pedestrian volume, plus 10% of the net increase in pedestrian volume due to the project.

3. Existing pedestrian traffic plus 10% of total Agriculture Building traffic.

4. Existing pedestrian traffic plus 10% of total Pier One pedestrian traffic.

5. Promenade traffic plus Pier One traffic.

6. Promenade traffic plus Ferry Building complex traffic.

Source: Wilbur Smith & Associates.

Vehicular Traffic

The Transportation Element of the Comprehensive Plan designates The Embarcadero as a major thoroughfare. Other major thoroughfares include the Clay and Washington Streets one-way couplet (Washington Street is one-way westbound west of Drumm Street; Clay is one-way eastbound) between Stockton and Hyde, and Market, Steuart, Howard and Harrison Streets which are two-way streets. Transit preferential streets in the vicinity as designated by the Transportation Element include Market, Mission and Steuart Streets. Exclusive transit lanes exist on Mission Street.

The Northeastern Waterfront Plan calls for improving The Embarcadero by realigning the roadway from Broadway to Berry and widening sidewalks in front of the Ferry Building. Split directional roads of two lanes each with right and left turn channelization at certain intersections are planned. The roadway median would include an exclusive transit right-of-way for the proposed light rail E-line, and a waterfront promenade for pedestrians, joggers and bicyclists. The plan further calls for removal of The Embarcadero freeway from Interstate-80 to Broadway. If removal is found to be infeasible in the near future, the Plan calls for planting, berming, and removal of surface parking underneath the freeway.

The project would generate a net increase of about 890 vehicle trip ends per day, about 110 of which would occur during the PM peak hour. Under the worst-case assumption that all these vehicles would park on or near the site, the impact of project-generated traffic on the Washington/Embarcadero and the Mission/Embarcadero intersections would not cause traffic conditions to deteriorate below the current 'B' level of service during the peak hour, a condition in which traffic flow is very good. (See Appendix F: Transportation, p. A-90, for a full description of traffic levels of service.) The limited amount of long-term parking available near the project would tend to disperse auto trips throughout the surrounding areas, diminishing the potential impact on any one location. Removal of parking spaces on-site would further disperse auto travel.

Cumulative vehicular and pedestrian traffic from the 16.1 million gross square feet of net new office development and the 0.5 million gross square feet of net new retail development would degrade service levels at all of the intersections shown in Table 19, p. 142. With cumulative development (assuming that existing traffic patterns and mode splits remain constant), the intersections at Mission-Main and Mission-Beale would be at service level 'F' (jammed conditions) during the PM peak. This would occur with or without the Ferry Building Rehabilitation project. Traffic levels at the Clay-Front and Washington-Battery intersections would not drop below level 'C' (stable flow) with addition of cumulative development or project traffic.

During construction, the project could cause traffic delays if equipment were to block all or part of a lane of The Embarcadero. These delays would be most likely to occur in front of the Agriculture Building, where the distance between the building and the roadway is as little as 10 feet in some locations. This impact could occur for short, intermittent periods (i.e., one to three hours) during the six months required to restore the west facade.

Parking

The Northeastern Waterfront Plan contains transportation policies for parking in the site area. Objective 1, Policy 2 states:

> Limit additional parking facilities in the Northeastern Waterfront and minimize the impact of this parking. Discourage long-term parking for work trips which could be accommodated by transit. Restrict additional parking to: (a) short-term (less than four hours) parking facilities to meet needs of additional business, retail, restaurant, marine and entertainment activities; and (b) long-term parking facilities for maritime activities , hotel and residential uses. To the extent possible, locate parking away from areas of intense pedestrian activity (page 16).

The Northeastern Waterfront Plan also calls for removal of exposed surface parking over the water, under the Embarcadero Freeway, and along The Embarcadero to improve the visual quality of the shoreline and facilitate access to the Bay.

Table 19

LEVELS OF SERVICE AT FREEWAY RAMP INTERSECTIONS
IN THE VICINITY OF THE PROJECT DURING PEAK-HOURS

	Mission-Beale (PM)		Mission-Main (AM)		Clay-Front (PM)		Washington-Battery (AM)	
	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C
Existing (1982)	D	0.89	D	0.85	A	0.51	B	0.52
Existing plus Cumulative development Without Project	F	1.60	F	1.32	C	0.73	C	0.80
Existing plus Cumulative development With Project	F	1.60	F	1.32	C	0.74	C	0.80

1. LOS stands for Level of Service which is defined in Table F-2, Appendix F, p. A-90.

2. V/C stands for volume to capacity ratio.

3. The 16.1 million gross square feet of net new cumulative office development and the 0.5 million gross square feet of new new retail development is listed in Table F-3, p. A-92. The project has been separated from the projects under formal review totals shown in Table F-4, p. A-95.

Source: Frederic Dock, Traffic Engineer

The project would respond to such policies by providing short-term-only parking and by removing surface parking along The Embarcadero. However, the 19 curbside loading spaces proposed by the project would conflict with the above policy.

Section 151 of the City Planning Code would require the project to provide 706 off-street parking spaces (calculated based upon the increase in floor area only). The proposed garage would provide 375 short-term spaces which would be about 50% of the requirement. In order to encourage short-term rather than long-term parking, the project garage would be priced higher than the long-term price range. According to Section 161 of the City Planning Code, projects within the Northern Waterfront Special Use District No. 1 may

be exempt from off-street parking requirements due to difficulty of access and urban design considerations.

The total net increase in parking demand from the rehabilitation project is estimated to be 170 parking spaces. This demand calculation is based on the number of work and non-work automobile trips generated by the project. The average percentage of non-work trips for multi-tenanted buildings is estimated to be 43%, as assumed for the travel demand analysis. The average length of stay for non-work trips is estimated to be two hours.

In order to estimate the increase in long-term parking demand by project workers, all work-related automobile trips were assumed to generate a demand for one parking space per trip. This would be worst case because some workers would use their autos during the day and thus allow multiple use of some parking spaces. The increase in short-term (non-work) parking demand was calculated by dividing the non-work auto trips by a turnover factor based on the average length of stay. (Turnover was calculated by dividing a 9-hour working day, 8:00 AM - 5:00 PM, by the average length of stay of two hours to give a turnover factor of 4.5) The project would generate a demand for 120 long-term spaces and 50 short-term parking spaces in addition to the long-term and short-term parking demand currently generated by the uses on the project site. The project would remove 66 existing short-term spaces and 342 existing long-term spaces and would provide 375 short-term spaces. The net on-site deficit of long-term parking would be 462 spaces. There would be a net surplus of 259 short-term spaces on-site.

Within 1,000 feet of the site are approximately 1,150 commercially available off-street parking spaces, not including the spaces on the project site. Average weekday daytime occupancy of the spaces is approximately 100%. Cumulative short-term parking demand from buildings proposed and under construction near the project site (which would compete for the parking within 1,000 feet of the project) is projected to be about 10 spaces. The proposed garage, which would provide 375 short-term spaces, would meet the net cumulative short-term parking demand from buildings proposed or approved within 1,000 feet of the project.

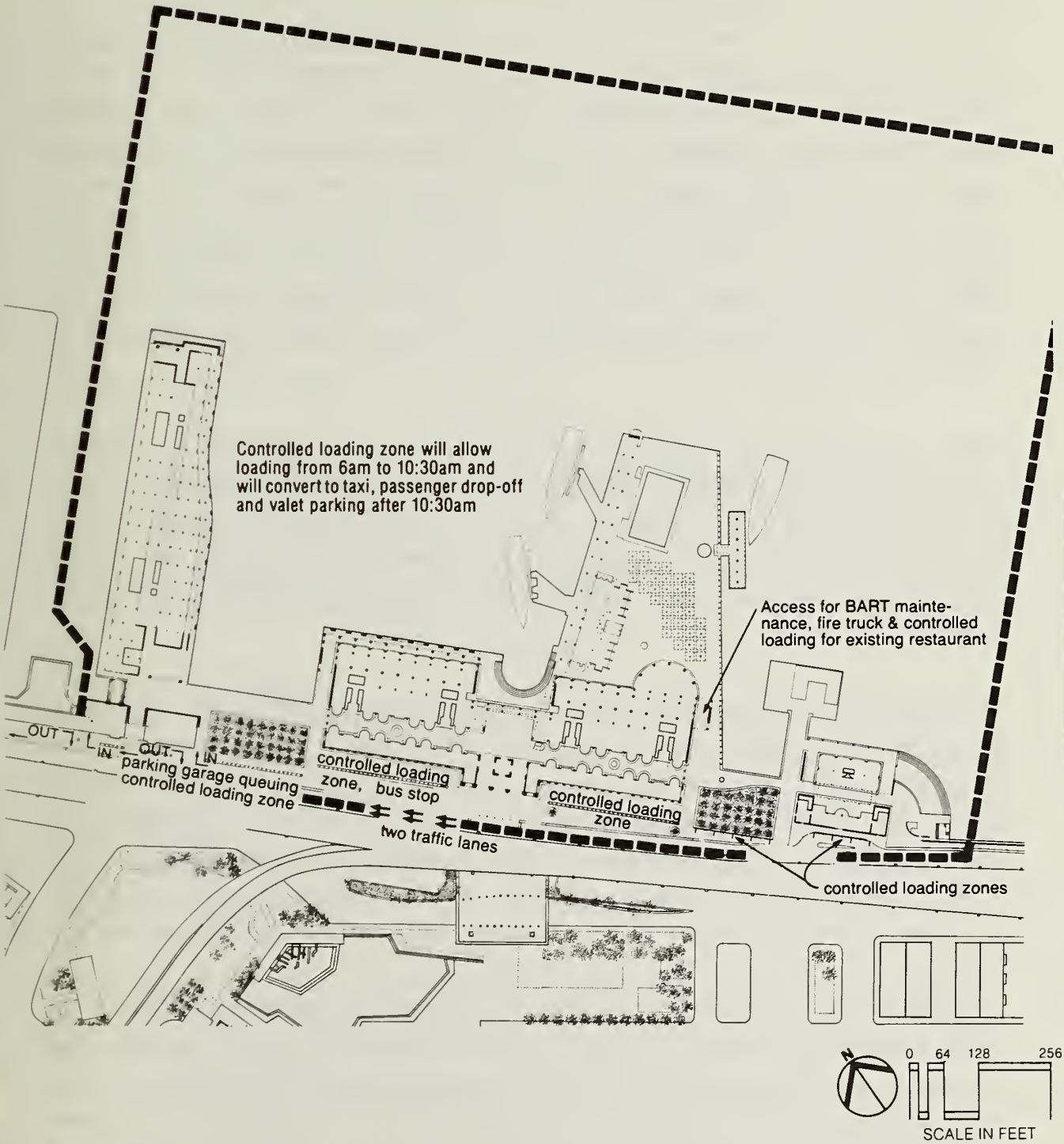
Parking for the project would be contained within two mechanical structures in the Pier 1 bulkhead building. As shown in Figure 30 (p. 145), a queuing lane into the structures would commence from The Embarcadero westbound at the west side of the Ferry Building. There would be room for about 15 cars to line up for the structures in the queuing lane. Each loading/unloading operation would take about 55 seconds under best operating conditions. Under worst case assumptions that each of the 375 spaces would turn over every two hours and that 20% of these turnovers (338) would occur during the PM peak hour, an average of about six vehicles would attempt to enter the structures at any one time during the peak hour. Under peak-of-the-peak conditions, up to 14 vehicles would attempt to enter the structures. About five of these vehicles would be generated by the renovation project. The queuing lane would be long enough to handle peak-of-the-peak conditions.

Using the methodology described in Appendix F, p. A-100, long-term parking demand for the 16.1 million gross square feet of net new cumulative office development and the 0.5 million gross square feet of net new retail development in the greater downtown area has been calculated to be about 15,600 spaces (including the project). The project would represent 0.7 percent of the total demand. As long-term parking demand is typically work (employee) related and is more likely to be influenced by cost rather than location (see Appendix F, p. A-100), it has been assumed to be distributed over the greater downtown and South of Market areas rather than just being concentrated near the proposed project locations.

A recent survey conducted by the Department of City Planning shows that there are about 37,000 off-street parking spaces in the C-3 district and an additional 6,500 spaces in the area bounded by The Embarcadero, Folsom, Eighth and Bryant Streets.[11] Based upon average occupancy rates, about 4,100 spaces remain available on a daily basis. The cumulative demand for the whole downtown area would create a theoretical net deficit of up to 11,500 spaces. However, parking demand has been based upon existing travel patterns and has not been adjusted by the availability of parking spaces or by the capacity of the freeway and bridge system. (Freeway and bridge capacity into downtown is essentially fixed at existing levels; major construction would be required to add new capacity). Therefore, the net deficit of 11,500 spaces does not mean

figure 30

SERVICE AND LOADING



source: I.M. Pei & Partners, Architects

that 11,500 autos would be driving on City streets in search of parking. Rather, the travel demand represented by the parking deficit would most likely shift to ridesharing or transit. (Increased ridesharing would not only reduce parking demand but would also reduce traffic impacts from the worst-case impacts shown in Table 19, p. 142) Increased transit use would add to the demands on the regional and local transit systems, particularly Muni. In addition, the estimated cumulative parking deficit of 11,500 spaces may be lower because the parking survey did not inventory the Civic Center area, the areas west of Eighth Street, south of Bryant Street or north of Washington Street. The survey indicated that inside the study area about 6,000 parking spaces have been added since 1967 and approximately 1,400 are proposed to be added (exclusive of 4,845 parking spaces to be provided in Yerba Buena Center).

Current City policy, as stated in the Revisions to the Transportation Element of the Master Plan Regarding Parking, is to "Discourage the addition of new long-term parking spaces in and around downtown, limit the amount of new spaces to that which cannot reasonably be accommodated by transit and locate long-term parking facilities in areas peripheral to the downtown commercial district."[12]

The Master Plan Parking Policy also states the need to "encourage short-term use of existing parking facilities within and adjacent to the downtown core by converting all-day commuter parking to short-term parking in areas of high demand or to car/van pool parking where short-term parking demands are low."[11] Accordingly, approximately 14,000 existing off-street spaces in the C-3-O zoning district could be converted to short-term-only parking if the City enacted legislation to establish public control over private garages.

Given projected cumulative development and demand, imbalances in long-term parking demand and potential supply could encourage the use of car pools and van pools, the creation of satellite (intercept) parking facilities in outlying non-residential areas or in outlying cities, with shuttle or expanded Muni service to the downtown, or increased use of direct transit. Peninsula residents, for example, may find Southern Pacific commuter trains more attractive as a means of commute if they could get no closer to downtown by

car than the train terminal at Fourth and Townsend Streets. All transit options would add to the demands on the regional and local transit systems.

Bicycle Circulation and Jogging

Policies in the Transportation Element call for facilitating safe use of bicycles as a means of transportation and recreation, and providing convenient and safe storage places for them. The Northeastern Waterfront Plan calls for improving The Embarcadero to include a path along the water for bicycles, pedestrians and joggers.[13] The Embarcadero Promenade does not separate paths for bicycles or joggers. Within the vicinity of the project site, Drumm Street is the only bicycle route shown as existing by the Transportation Element. Spear and Market Street are designated to be improved as bicycle routes.

Removing on-site parking in front of the Ferry Building and other surface parking would improve safety for joggers and bicyclists by reducing potential conflicts with autos and trucks. Curbside loading, however, could result in pedestrian/vehicle conflicts. The project includes no proposal for bicycle paths but would include bicycle racks in secure areas.

Service and Delivery

According to the Northeastern Waterfront Plan, movement of goods into and out of piers should be facilitated in the design of road systems.[14] Proposed policies outlined in the Department of City Planning report Guiding Downtown Development, July, 1982, (page D-6) call for improved facilities for off-street goods delivery to avoid on-street conflicts between delivery and other vehicles, and pedestrians.

An average of 256 and a maximum of 320 truck stops daily would be generated by the project,[15] including trips by commercial autos, vans, pickups, single-unit and semi-trailer trucks. According to Section 152 of the Planning Code, five off-street freight loading spaces would be required for the project.

According to the Department of City Planning formula, expressed in City Planning Commission Resolution No. 9286[16], the project would generate demand for 19 off-street loading spaces. Two to four of these spaces would accommo-

date existing demand. Under the adopted guidelines, each space must be 35 feet in length, 12 feet in width and have a vertical clearance of at least 14 feet.[16] The project would not include any off-street loading spaces. Instead the project sponsor proposes to use on-street spaces in front of the Ferry Building, on the west, to accommodate service and delivery vehicles. Loading areas are shown in Figure 30 (p. 145). The project sponsor has proposed this approach as the site's waterfront location could preclude constructing basements for service areas and the need to preserve the buildings' historic qualities could preclude placing loading areas within facades. Alternative F-2, pp. 220-222, examines alternative approaches for providing off-street parking spaces for service and delivery vehicles.

Experience at the Pier 39 development one mile north of the site is relevant in predicting loading impacts likely to occur with the project. Service vehicles and freight loading at Pier 39 present a continual problem for the building management and the Fire Department. A full-time staff of four persons currently monitors and directs all vehicles entering the pier. The number of vehicles authorized to enter Pier 39 on a typical weekday is estimated to range from 200 to 300,[17] including traffic generated by the 300 sailboat berths on the pier. Pier 39 provides approximately 40 irregularly shaped loading areas on the perimeter of the pier, and all are used heavily. The walkway around the perimeter of Pier 39 was intended to provide public access to the waterfront in conformity with BCDC policies. The use of this area by service vehicles constrains use by pedestrians, and causes vehicle-pedestrian conflicts.

BCDC has required that all deliveries to Pier 39 be made between 11:30 P.M. and 11:30 A.M. to minimize conflicts between vehicles and pedestrians. Vehicles are stopped at the security gate at the west side of the pier, and drivers are assigned parking spaces for making deliveries. The pier requires surveillance during hours of heavy loading to insure that the one-way circumferential roadway is kept clear for emergency vehicles and other traffic. Five freight elevators are available.

Pier 39 contains approximately 83,400 square feet of restaurant space and approximately 82,000 square feet of retail space, compared to a total of 84,100 square feet of restaurant space, 66,000 square feet of retail and 308,000 square feet of office space proposed for the Ferry Building Complex.

Loading facilities at the Ferry Building Complex would be clustered as near as possible to restaurant facilities, the major generators of delivery vehicle traffic, and away from areas of pedestrian activity. However, these two conditions could not be met simultaneously in all locations on the site. For example, the restaurant proposed for the BART platform would be an area of intense pedestrian activity. Delivery vehicles could not park adjacent to it and at the same time avoid pedestrians. This would also be true for deliveries made at the ends of galleries and near elevators. Use of the BART easement and fire lane for delivery vehicles would make efficient use of this space, but would also conflict with pedestrian activity on the platform and, possibly, with fire vehicle access.

The sponsor would request white and yellow controlled loading zones be provided along the curb line at the western boundary of the site (eastern side of The Embarcadero) to accommodate 19 loading spaces. (See Figure 30, p. 145) Loading for service and delivery vehicles would be permitted from 6 to 10:30 AM; thereafter, the zones would be used for taxis, passenger drop-off and pick-up, and valet parking. However, the City does not consider this an acceptable solution to the requirement for providing off-street loading spaces.[18] Further study to resolve this issue would be necessary. (See also Mitigation and Alternatives, pp. 191 and 220-222.)

Goods probably would be transferred from trucks to electric carts for delivery inside buildings. The carts would use existing access easements and could enter buildings for distribution on the ground floor and via elevator to upper floors. By controlling delivery times, goods movement could be scheduled for periods of low pedestrian activity, such as between 6-10:30 AM. Pedestrian conflicts with electric carts would be less hazardous than conflicts with larger vehicles as the carts are slower, smaller and have better visibility and maneuverability than trucks and vans.

Transportation Plans

Two modifications to existing transportation facilities in the vicinity of the Ferry Building are planned by public agencies. The relationships between the project, the Muni Five-Year Plan, and removal of The Embarcadero freeway, as proposed by the City of San Francisco, are discussed below.

The Muni Five-Year Plan (to 1986) calls for the creation of a streetcar line along The Embarcadero to begin at the Southern Pacific terminal at 4th and Townsend, travel along the waterfront on The Embarcadero using the Belt Line tracks, then to the Fisherman's Wharf area on Jefferson and Beach Streets and through the Fort Mason Tunnel, terminating at the western end of the tunnel. This E-line would require double tracks where a single track now exists, and would share tracks with the Belt Line night-time freight trains. Double tracking the E-line would require removal of approximately 50 parking spaces under The Embarcadero freeway. These spaces are currently used for long-term parking and are operated by the Port of San Francisco.

Implementation of the E-line would improve Ferry Building transit access. Due to the planned use of historic vehicles along this route, tourists from the Fisherman's Wharf area are likely to be attracted to the Ferry Building by the E-line. Transit access to the Ferry Building for commuters from the SP depot would be qualitatively improved, as a fixed rail vehicle would have shorter headways, better visibility, a semi-exclusive right-of-way, faster running times, and better schedule adherence than the existing Muni service from the SP station to the site area.

The Muni Five-Year Plan includes three other projects which would affect transit services in the site vicinity. These improvements would increase the transit accessibility of the Ferry Building and the Northeastern Waterfront, and include:

1. Addition of the proposed 62-line to the California Street cable car service and extension of the California Street cable car line to the eastern end of Market Street.

2. Relocation of the Muni turnaround at Mission and Steuart Street, closer to the Ferry Building (a specific location has not yet been determined).

3. Construction of an improved Muni-Metro turnaround facility beneath Embarcadero Plaza, and an extension of Muni-Metro south and west to the SP Depot.

All of the Five-Year plan proposals are dependent upon the availabililty of funding, including Federal and State grants and City monies.

Embarcadero Freeway Removal: The Metropolitan Transportation Commission (MTC), Caltrans, and the City of San Francisco are preparing a draft environmental impact study (DEIR/DEIS) of the proposed I-280 (Interstate 280) Transfer Program, which will include a study of impacts associated with proposed removal of The Embarcadero freeway. Project-generated auto traffic which would otherwise use the Washington and Clay Street ramps to reach U.S. 101 and the Bay Bridge would use Main and Beale Street or First and Fremont Street ramps. Proposals for The Embarcadero roadway after the demolition of the freeway are for either four lanes of traffic (two in each direction) with the E-line tracks in the median, or six lanes of traffic with the E-line in the median. Mission Street would be closed to traffic between Steuart Street and The Embarcadero roadway. The effect of this closure would be to shift east-west auto traffic from the site further south onto Howard and Folsom Streets.

Footnotes:

1. Regional distribution, office trip generation, trip purpose, peak hour percentage, and mode splits are from Attachments 1 and 2 of the Guidelines for Environmental Impact Review, Transportation Impacts, Department of City Planning, October 1980. Mode split assignment is supplemented by survey data, collected by Frederick Dock, Traffic Engineer, and is on file with the Office of Environmental Review.

2. The Department of City Planning, Office of Environmental Review (OER), has issued a memorandum, dated July 2, 1982, dealing with differences in the land-use and employment trend approaches, and recommending that both approaches be used in future EIRs. This memorandum is on file with and available from the Office of Environmental Review, 450 McAllister St., 5th Floor.

3. Retail trip generation is from Trip Generation, Institute of Transportation Engineers (ITE), 1979. Rates have been adjusted from vehicle trip ends to person trip ends based upon an assumed vehicle occupancy of 1.4 persons per vehicle. The survey of retail travel was conducted at Embarcadero Center on Thursday, June 17, 1982 between 10:00 AM and 4:00 PM by Frederick Dock, Traffic Engineer, and is supported by data published in Intra-CBD Secondary Travel Patterns of Downtown Workers, Transportation Engineering Journal of ASCE, Proceedings of the American Society of Civil Engineers, ASCE, Vol. 108, No. TE1, January 1982.
4. Northeastern Waterfront Plan, op. cit., p. 8
5. San Francisco Municipal Railway, 5-Year Plan 1980-85, April 1, 1980, p. 220.
6. The 31 affected Muni lines are the 1, 1x, 2, 5, 6, 7, 8, 9, 11, 12, 14, 14GL, 14X, 21, 31, 31X, 32, 38, 38L, 38AX, 38BX, 41, 42, J, K, L, M, N, 71, and 80X.
7. 1982 Muni ridership is approximate based on a compilation of Muni ridership by the Department of City Planning.
8. Muni projections are from Municipal Railway Fleet Rehabilitation and Replacement Plan, San Francisco Public Utilities Commission, May, 1982; BART projections from Marty Birkenthal, BART, telephone conversation of August 18, 1982; SamTrans projections from Gregorio Kipp, SamTrans, telephone conversation of August 18, 1982; AC Transit proposals from Ted Reynolds, AC Transit, telephone conversation of August 18, 1982; Golden Gate Transit proposals from Alan Zahradnik, Golden Gate Transit, telephone conversation of August 19, 1982; Southern Pacific proposal from Jim Strong, Design Engineer, Southern Pacific, telephone conversation of August 26, 1982.
9. City and County of San Francisco, Amendments to the Northeastern Waterfront Plan, Resolution No. 8481, January 31, 1980.
10. Ibid., page 53.
11. Inventory of Off-Street Parking Spaces, San Francisco Department of City Planning, May 24, 1982.
12. Revisions to the Transportation Element of the Master Plan Regarding Parking, Resolution 7647, San Francisco Planning Commission, January 20, 1977.
13. Amendments to the Plan for the Northeastern Waterfront, op. cit., p. 25.
14. Northeastern Waterfront Plan, op. cit., p. 8.
15. Wilbur Smith & Associates, San Francisco Center City Pedestrian Circulation and Goods Movement Study, September 1980, p. 75.
16. San Francisco City Planning Commission, Resolution No. 9286, "Off-street Freight Loading and Service Vehicle Space Requirements and Guidelines," January 21, 1982.
17. On-site interview with Neil O'Brien, Chief of Security, Pier 39, August 19,1981.
18. Frank H. Moss, Jr., Deputy Director for Engineering, letter, November 24, 1981. A copy of the letter is on file with the Office of Environmental Review, 450 McAllister Street, Fifth Floor.

H. Noise

Construction: The San Francisco noise ordinance (Regulation of Noise, Article 29, Section 2907b of the Municipal Code) limits noise emissions from powered construction equipment to 80 dBA at a distance of 100 feet from the equipment. This requirement does not apply to impact equipment, provided that it has intake and exhaust mufflers that accomplish maximum noise attenuation. Such equipment could generate noise up to 88 dBA[1] at 50 feet or 82 dBA at 100 feet. Impact equipment would be used for pile driving at Pier One, the Ferry Building and the Agriculture Building. Pile driving near Pier One would primarily affect the tenants of Pier 1-1/2 for a period of three months. The Ferry Building is more than 225 feet from Pier One at its closest point, so impact equipment noise from Pier One would be attenuated to less than 76 dBA at the Ferry Building. Driving new piles at the Ferry Building would impact any tenants who had not vacated the building prior to construction. Impact noise levels of 88 dBA at 50 feet would occur for five months. Similarly, pile driving for new piles north and south of the Ferry Building would occur for several months, overlapping with other pile driving activities for the project. Existing sidewalk concrete would be removed with a jackhammer, causing noise levels of 88 dBA within a 50-foot radius of the site.

Sinbad's Restaurant would be exposed to exterior noise levels in excess of 80 dBA for about four months due to demolition, pile driving and concrete ripping at the Agriculture Building, which would take place less than 100 feet from the restaurant. In addition, construction and demolition east of the Ferry Building on the BART platform would generate exterior noise levels of 70-82 dBA for about four months at Sinbad's which is less than 100 feet from the BART platform. Noise levels would also affect ferry boat commuters and others passing through this area. These noise levels are considered highly annoying by most people.

Trucks associated with construction would not noticeably increase noise levels near the site, as existing noise levels due to traffic would continue to dominate the ambient noise environment. This would be true for most of the downtown area through which the trucks might drive; it is expected that haul trucks would avoid the downtown and use the closest freeway access.

Section 2980 of the San Francisco noise ordinance limits night-time construction noise levels to no more than 5 dBA louder than the existing ambient noise level. As the sponsor is considering double-shift construction, a night-time construction permit from the Department of Public Works would be required. Most construction and all impact equipment work would exceed the night-time noise standard. Construction noise at night would be heard by occupants of the Hyatt Regency Hotel and of the residential buildings in Golden Gateway Center, Golden Gateway Commons, and possibly Telegraph Hill. Perception of noise is reduced by about 6 dBA each time distance is doubled. If construction noise were 88 dBA at 50 feet from the source, noise levels would be 67 dBA at the Hyatt Regency, about 600 feet from the site; 64 dBA at Golden Gateway Center, about 800 feet from the site; and 61 dBA at Golden Gateway Commons, about 1,200 feet from the site. According to the Environmental Protection Element of the City's Comprehensive Plan, background noise levels in this area is 65 dBA (p.16). During the day, many more people would be affected by noise than at night, as there are more people in the area; but during the day, office workers would tend to be less sensitive to noise levels than would people at home in the evening and at night. The sponsor would notify the building managers of nearby residential buildings and hotels, if evening and night-time work were to occur.

Footnotes

1. EPA, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," December 1971.

I. Air Quality

Construction: The project would not involve many of the activities associated with an increase in suspended particulate matter, such as excavation, earthmoving or construction traffic on unpaved streets. Demolition and new construction for the project could increase total suspended particulates, at a lower rate than the 1.2 tons per acre per month of activity, a standard commonly used for heavy construction.[1] If the 12 site acres subject to construction were to generate one-half the amount of dust as heavy construction projects of similar size, about 7.2 tons of dust would be generated over the six months of site preparation. Watering down would occur during construction, and this would reduce dust by about 50%.

Cumulative Impacts: Air quality impacts are presented in Tables 20 and 21 (pp. 156), assuming full project occupancy in 1987. The greatest impact would be carbon monoxide (CO), the critical auto emission. Pollution levels for most pollutants are fairly constant throughout the City, except for CO which varies considerably within two blocks of any given location.[2] The estimated 890 vehicle trip ends per day generated by the project would discharge about 16 pounds of CO into the atmosphere per day (2.95 tons per year). As this material would be discharged across streets within one-half kilometer of the site, air quality standards would not be violated. However, The Embarcadero freeway would approach 87% of the federal 1-hour CO standard due to this and other projects, as shown in Table 20. If 5 parts per million were added to the 8-hour CO concentration to account for local background pollution[3], the site area would exceed the federal 8-hour CO standard by about 7%, due to this and other projects, as CO concentrations would reach about 10,700 micrograms per cubic meter. Pollution levels of hydrocarbons (HC), nitrogen oxides (NO_x), sulfur dioxide (SO_2) and suspended particulate (SP) due to project-related traffic would not measurably change, compared to 1987 conditions without the project. It should be noted that stringent federal and California state standards and improved automobile design are expected to improve air quality conditions by 1987; this has been taken into account in the calculations of the project's air quality impacts.

Locally generated ozone and chemicals that contribute to ozone formation have regional impacts, particularly at locations to the south, on the Peninsula, and to the southeast around Livermore. Cumulative development including the project would incrementally add to such impacts.

Footnotes:

1. U.S. EPA Compilation of Air Pollutant Emission Factors, 1977,p. 11.2.4.
2. Paul Brand, BAAQMD, Information Officer, conversation, July 30, 1981.
3. Standards violations have been detected on other highly trafficked streets, such as Van Ness Avenue, leading BAAQMD to add this factor to project impact analysis to account for background CO levels. Tom Perardi, BAAQMD, Senior Planner, telephone conversation, September 7, 1981. An additional 5 parts per million is equal to 5,750 micrograms per cubic meter. One part per million equals 1,150 micrograms per cubic meter.

Table 20

1987 ANNUAL PROJECT-GENERATED AND CUMULATIVE POLLUTANT EMISSIONS
(Tons per year)

	Project	Cumulative Development/1/	1982 Regional Total/2/	1987 Regional Total /2/
Carbon Monoxide	2.95	4,127	1,050,000	854,000
Hydro-carbon	.28	364	224,000	183,000
Nitrogen	.04	534	218,000	198,000

1. Includes all buildings listed in Table F-3, Appendix F, Transportation, at full occupany.

2. 1982 Bay Area Quality Plan, prepared by ABAG, BAAQMD and MTC, July 1982.

Table 21

CUMULATIVE VEHICULAR CO CONCENTRATIONS - 1987
(Micrograms per Cubic Meter)

		At Project Site		At Embarcadero Freeway	
	Fed. Standard	Without Project	With Project	Without Project	With Project
Carbon Monoxide					
1- hour	40,000	8690	8710	34,749	35,160
8- hour	10,000	4960	4970	4,200	4,250

Source for both tables: Planning Analysis & Development, and BAAMQD, "Guidelines for Air Quality Impact Analysis of Projects," 1975, 1981 Update.

J. Energy

Existing Consumption: Gas distribution mains and underground electric facilities are used by the existing structures on the site. Current electrical usage in the site buildings averages 593,100 kilowatt hours (KWH) a month, 90% of which is used by the Ferry Building. Electrical energy used on the site for outdoor lighting and on the BART platform account for 24,400 KWH per month. Natural gas is used primarily in the Ferry Building, which consumes about 16,900 therms per month for heat and hot water. Other users on-site consume about 2,800 therms per month.[1] Total monthly energy consumption in buildings averages to about 8.02 billion BTU.[2]

Proposed Energy Systems: Each building would be provided with completely independent mechanical and electrical systems, with no interconnecting services. Separate service and metering systems would be provided for restaurants, retail shops and offices. Energy costs would be apportioned to tenants within each group according to area occupied and hours of operation.

Heating would be provided by natural gas-fired boilers to generate low temperature hot water. Each building would have one or more independent hot water heating systems including boilers and circulation pumps. An automatic temperature control system for both heating and air conditioning would provide operating flexibility as each project tenant would be able to control the time and amount of energy usage for each area of the building. There would be a computerized, automated monitoring and control system for energy conservation.

Heat pumps would circulate outdoor air for project cooling when the outdoor air is cooler than the indoor air. The atrium and galleria would be treated as outdoor environments and would be non-airconditioned areas: they would be unheated in winter, and would be cooled in the summer by natural ventilation and mechanical exhaust ventilation to remove internal heat through high points in the skylights. The three large arches at the central entrance of the Ferry Building would be open to permit air flow, as would the large arches at the north and south facades. (The latter would be closed at night with gates.) Windows would be openable.

Future Energy Consumption: The Ferry and Agriculture Buildings would not have to meet the State of California's energy conservation standards as they are designated landmarks.[3] Nevertheless, the project sponsor would attempt to meet State energy requirements for heating, ventilating, and air conditioning (HVAC) and lighting that would not affect building design. Buildings would be naturally illuminated through skylights and public gallerias would not be artificially cooled; this would lower energy consumption in the buildings. The HVAC systems for Pier One would be designed to meet or exceed energy conservation standards of Title 24, Part 6, Article 2 of the California Administrative Code, Energy Conservation Standards.

New HVAC systems for the Ferry and Agriculture Buildings could result in less energy consumption per square foot than under existing conditions. New construction on Pier One would result in more energy consumption than is currently used, as most of the pier is not now heated. However, overall energy consumption for the project as a whole would likely be less than existing energy use, as discussed below.

Exact projections of average daily, monthly and annual energy consumption for the Ferry Building Complex are not available as the building design has not been advanced to a point to allow such calculations. It is very difficult to project the energy consumption of a building, particularly a multi-tenant building such as this one. However, it is possible to estimate energy consumption based on average usage figures provided by the California Energy Commission.[4] It should be stressed that these estimates are speculative, since the average usage figures may not readily apply to remodeled buildings. To calculate energy demand at this early stage of project design, the following assumptions were made:[5]

- Building occupancy, lighting, hot water load and miscellaneous utilities would follow the Title 24 profiles.

- Due to the mild weather location, HVAC equipment load would be proportioned to the outside air temperature.

- Lighting loads would comply with Title 24 standards for each function.

- The complete building energy consumption would comply with Title 24 energy budgets.

The project's connected electrical load would be approximately 4,400 kilowatts. Average monthly electrical consumption would be about 418,000 KWH, or 0.76 KWH per square foot of interior area per month. Annual electrical consumption would be 5.02 million KWH, or 9.1 KWH per square foot per year. This would represent a reduction of about 29% from existing usage. The project's peak electrical consumption of about 3,300 KWH would occur on September afternoons; this would not coincide with PG&E's system-wide peak demand period which occurs on August afternoons. Design day consumptions would be 29,550 KWH during a 24-hour period. Annual consumption and peak day demand curves for electricity are shown in Figure 31, p. 160. Annual electrical use would be equivalent to 93.4 thousand BTU/ square foot/ year, or 7.78 thousand BTU/ square foot/ month.

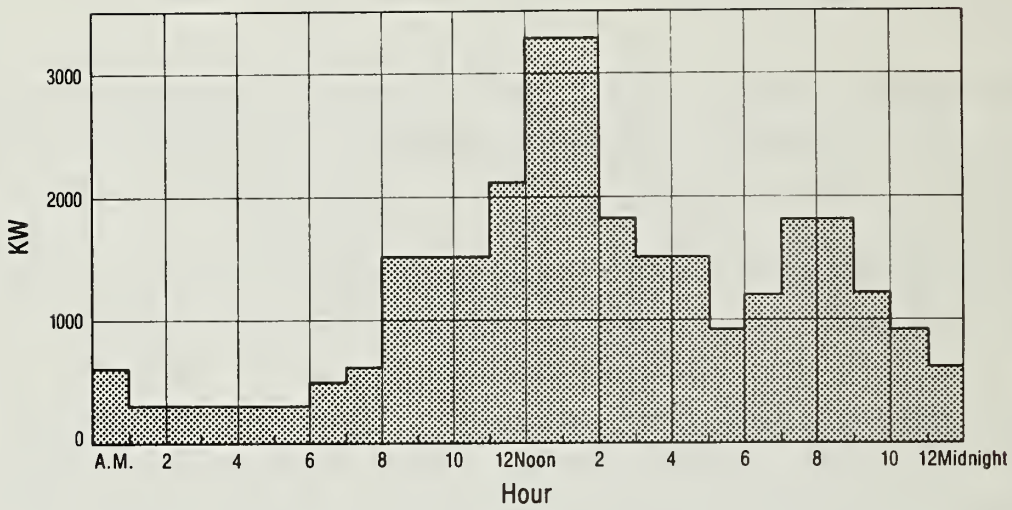
Annual natural gas consumption would be about 188,900 therms, or 15,740 therms per month; this would represent about a 7% reduction from present usage. The project's peak gas consumption of about 70.75 therms would occur on weekday mornings in January (about 12.9 BTU per hour); this would coincide with PG&E's system-wide peak demand period which occurs on January mornings. Annual gas consumption and design day demand curves are presented in Figure 32, p. 161. Estimated average consumption of natural gas per day would be the equivalent of about 94 BTU per square foot, or 34.3 thousand BTU per square foot per year.

Total energy consumption for the project would be about 127.7 thousand BTU per year per square foot, as compared to the maximum 130.1 thousand BTU allowable by Title 24 standards. Total monthly consumption would drop from 8.02 billion BTU per month to 5.85 billion BTU per month, a decrease of 27%.

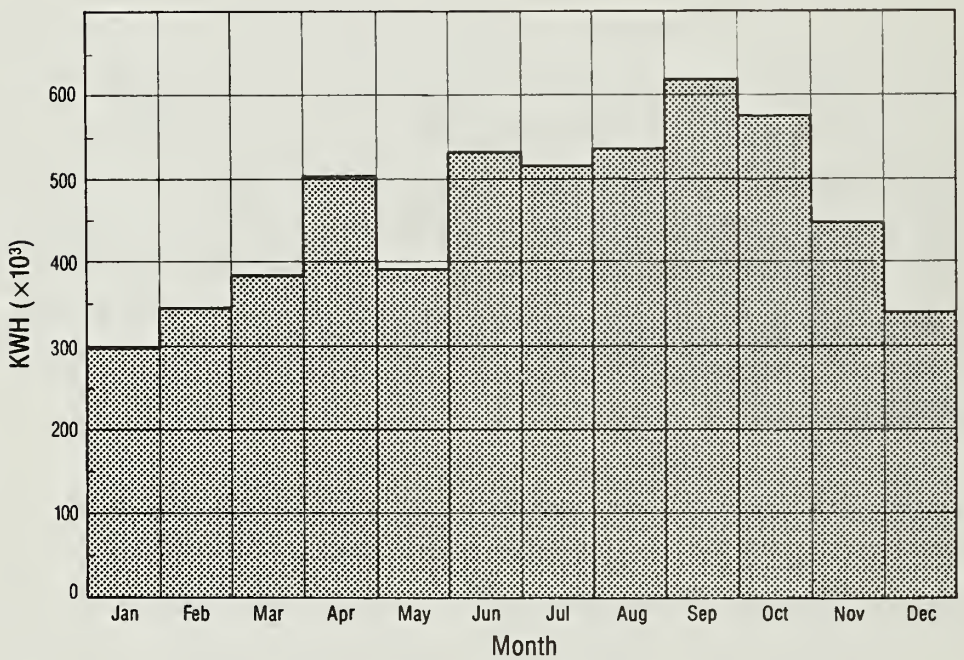
No data to estimate energy consumption due to construction are available at this time. The increase in vehicle trips due to the project would result in an increase of gasoline consumption of about 1,000 gallons per day.

figure 31

PROJECTED ELECTRICAL DEMAND LOAD AND DISTRIBUTION



Daily Electrical Demand, Peak Summer Month (September)

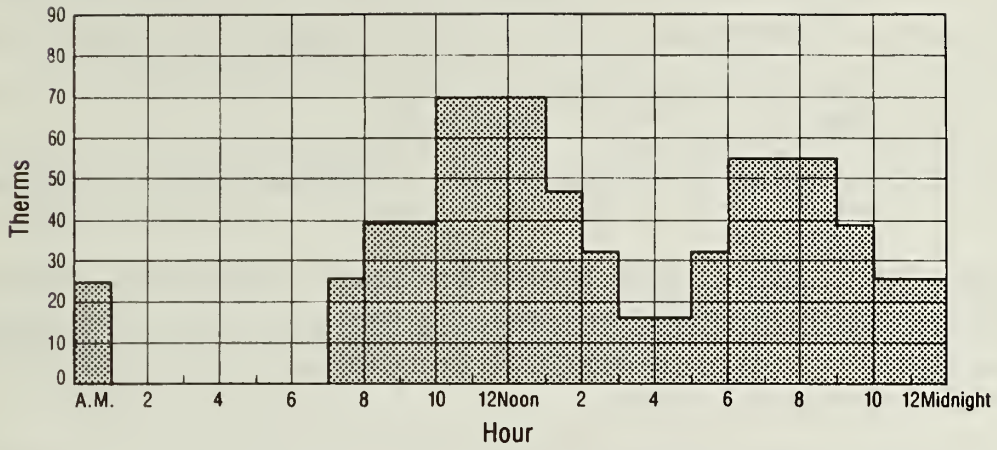


Annual Electrical Consumption

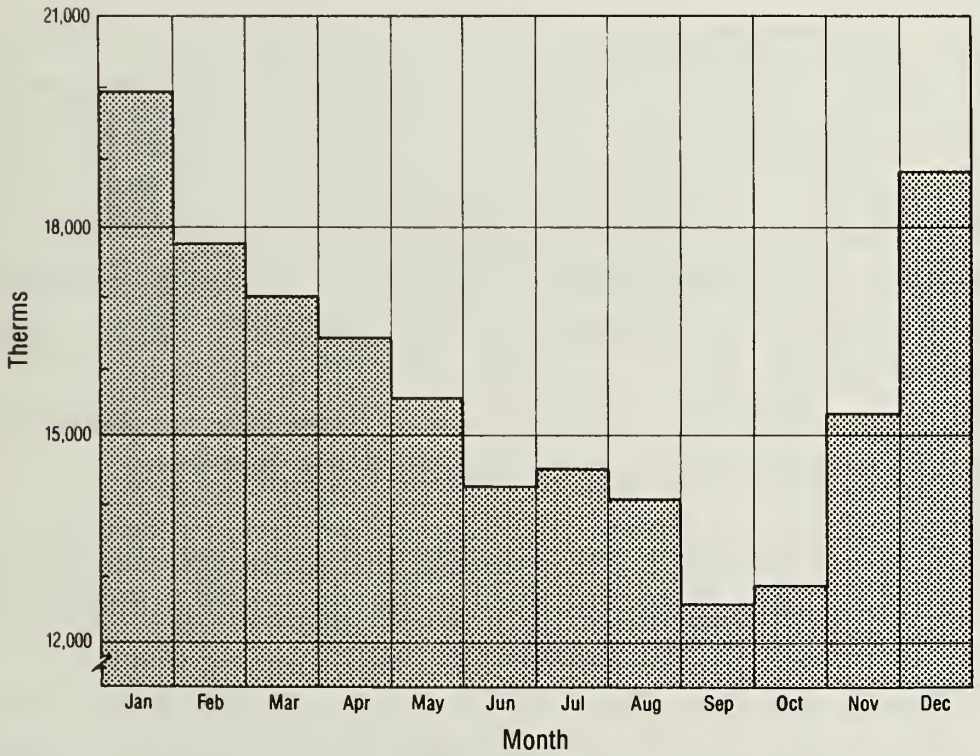
source: Syska & Hennessy, Inc., Engineers

figure 32

PROJECTED NATURAL GAS DEMAND AND DISTRIBUTION



Natural Gas Peak Day Consumption, (January)



Annual Natural Gas Consumption

source: Syska & Hennessy, Inc., Engineers

Footnotes:

1. Electrical and gas consumption for a 13-month period from May 13, 1980 to June 15, 1981. Data provided by William V. McIntosh, Power Engineer, PG&E.
2. BTU (British Thermal Unit): A standard unit for measuring heat. Technically, it is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit (251.97 calories) at sea level. 1 KWH = 10,200 BTU, assuming operational efficiency of 33% for fossil or nuclear fueled power plants. (1 therm = 100,000 BTU.)
3. T20-1456 of Title 24 states: "These regulations shall not apply to the reconstruction or restoration of any building that has been designated by official government action as having historical or architectural significance.
4. Energy Conservation Design Manual for New Non-Residential Buildings, as amended September 20, 1978, p. 5.1.4.
5. All estimates of energy consumption are from Syska & Hennessy, Inc. Engineers, letter, August 4, 1982. A copy of this letter is on file with the Office of Environmental Review.

K. Employment, Housing and Fiscal Factors

Business On-Site

Tenant Mix: The proposed project would be occupied by a combination of existing tenants who would return after rehabilitation, and new tenants. The tenant mix for the proposed project has been estimated based on information from three sources: 1) a survey of existing tenants and their responses to the question of whether they would return to the site when the project would be complete; 2) the proposed uses and floor areas for project buildings; and 3) average square footage per employee requirements for various uses. The methodology which was used to construct a composite estimate of the tenant mix in the proposed project, based on this information, is explained below. For further details, refer to Appendix G, pp. A-107 to A-126.

1) The existing 100 tenants at the site were asked whether they would return to the site after rehabilitation, even if the rent were as high as $30 per square foot per year.[1] The tenants were then asked where they would relocate, if they did not return to the site. Twelve firms said they definitely would return, 13 firms said they would not return and would move outside San Francisco, 22 firms said they would not return and would move somewhere else in San Francisco, and 12 firms would not return but did not know where they might relocate. The rest of the tenants (41 firms) were uncertain about their relocation plans. These firms are assumed to be returnees, as are the 12 firms who said they definitely would return (for a total

of 53 firms assumed to be returnees.) The assumption that tenants who were uncertain about whether they would return would be possible returnees is based on the sponsor's encouragement of existing tenants to return to the site after rehabilitation and on the assumption that uncertain tenants would meet prices similar to those at the project and would thus have no price-related reason not to return. Also, many of the existing tenants are water-related, with locational preferences for the area; Pier One would be oriented to such firms.

2) Proposed uses and floor areas are shown in Table 2 (p. 24). The sponsor proposes that Pier One be occupied by water-related uses.

3) Average area per employee is assumed to be 250 gross square feet per office employee and 500 gross square feet per retail and restaurant employee. These figures correspond to existing uses and to projected uses in other EIRs.[2]

Based on this methodology, the area that would be occupied by new and returning tenants in each building can be calculated by multiplying the number of employees of returning tenants by the average square footage factors to get the square footages by use by building for returning tenants. The square footage by use by building for new tenants is the remaining space which would not be occupied by returning tenants.

Relocation: According to the survey responses, 47 tenants said they would not return to the site if rents were as high as $30 per square foot. Of those, 13 said they would move outside San Francisco, 22 said they would stay in San Francisco, and 12 were unsure where they would go. The 47 firms that indicated that they would not return now have 366 employees.

Temporary relocation would be provided for some firms during rehabilitation. All firms but the World Trade Club would definitely relocate, at least temporarily. Other long-term lease holders might be relocated temporarily to Pier One. The Port has not decided where it will relocate in the interim. Some tenants might not be able to find similarly priced space in the vicinity of the site. Once moved, such firms might not move back, even if they had

stated that they would pay the higher rent.

Cumulative Impacts: The proposed project, together with other projects approved, under construction, and under formal review in San Francisco, would add 16.1 million square feet of office space by the time the project is occupied by 1985, if all were built (see Tables F-3 and F-4, pp. A-92 to A-95, Appendix F). The project would represent about 2% of this total. At 1970-79 absorption rates these projects would be equivalent to about an 18- to 19-year supply. Low vacancy rates and rising rents, however, suggest that supply has been less than demand. Therefore, if more spaces were made available, absorption rates could rise. Additional space could release some of the upward pressure on rents caused by the present short supply. Rents could go down and vacancy rates could go up.

New downtown office space (and employment) would increase the demand for retail goods, food and business services in the area. To the extent that new buildings do not include tenants providing business support services and worker services, such as retail and restaurant, the need would increase for such services. The projects approved, under construction, and under formal review in San Francisco would add about 535,000 square feet of retail and restaurant space. The proposed project would include retail and restaurant space, representing about 34% of this total, that would serve the increase in downtown office workers.

On-Site Employment

Permanent Employment: The number of permanent jobs at the site would be about 1,850. This number is derived by applying the average square footage per employee factor to the area proposed for each use (see Table 22, p. 165). Employment at the site would increase from 958 to 1,846 employees, for a 93% increase, or 888 employees.

Table 22

PROJECTED PERMANENT EMPLOYMENT AT THE PROJECT SITE

	Building Space (Gross Square Feet)	Space per Employee[3] (Square Feet)	Projected Number of Employees
Office	365,300[1]	250	1461
Restaurant	96,800[1]	500	194
Retail	84,100[1]	500	168
Building Maintenance	682,300[2]	30,000	23
Total Employment			1846

1. Common and core areas are distributed proportionally across the three land uses to the proposed occupied areas in Table 1 (p. 22) for each building.
2. Includes parking.
3. 81.104E, Montgomery-Washington Building EIR, certified January 28, 1982, p. 71.

Employment distributions for employees assumed to be returning are taken from the survey of existing tenants and employees in the Ferry Building Complex. Employment distributions for new Pier One employees are based on the characteristics of world trade or water-related employees in the existing three buildings. Employment distributions for the new office employees in the Agriculture Building and the Ferry Building are patterned after the characteristics of office employees interviewed at 444 Market and 595 Market. For new restaurant employees in all three buildings, and for maintenance employees, the characteristics of existing restaurant employees on the site are used. And, for new retail employees in the Ferry Building and Pier One, retail employees from 444 and 595 Market are used.[3]

The main differences between the existing distribution of occupations and the projected distribution would be a small decline (less than 5%) in the proportion of clerical and professional or technical employees, and a larger decline (about 5%) in the proportion of managers, administrators, or officials. There would be an increase (about 5%) in the proportion of food service, and an increase (about 5%) in other service and maintenance employees. Although the proportions would decline for some occupations, the actual number of workers in each occupational category would increase, as overall employment at the site would rise. Clerical employees would increase

from 306 to about 510, food service employees would increase from 16 to about 180, and other service and maintenance employees would increase from 21 to about 150. Thus, the project would increase the number of lower-paying jobs[4] on the site, providing more job opportunities for less-skilled workers.

The largest number of employees (48%) would be expected in wholesale and retail trade, and in the service and government enterprise sector (25%). Transportation, communication and utilities employment would be 11% of total employment, and finance, insurance and real estate, 9%. The largest net employment change would be in wholesale and retail trade.

Construction Employment: Construction employment in San Francisco would increase during the three years of rehabilitation and new construction on site. Based on a construction cost estimate of $105 million, with 60% of the cost attributed to labor, 220 days of work a year, and wages of $30 per hour, the project would employ about 400 construction workers in each of the three years, for a total of about 1,200 person-years of employment, overall.[5]

Multiplier Effect: Each new job due to the project would create more jobs through the multiplier effect, as each new employee spends income on goods and services. These expenditures would increase demand which in turn would require new workers. Employers also spend money for business goods and services, such as office furniture, to accommodate new employees. These effects ripple through the local economy by having a primary impact (the new job) and secondary impacts to supply the demand created by the original job (resulting in additional jobs). The size of the multiplier effect in the Bay Area has been estimated in the University of California input-output model.[6] Multipliers show the effect growth in one sector of the economy has on all other sectors. Growth is expressed in sales by sector and can be translated into jobs.

The number of new construction jobs due to the project would be 400, and net permanent jobs would be 888, based on the projected total employment less the number of existing on-site jobs. About 390 additional jobs in the region would result from the multiplier effect of construction employment and 820 additional jobs would result from the multiplier effect of permanent jobs.

However, the net increase in permanent office, retail and restaurant jobs on-site may not be new jobs to San Francisco.[7] An alternative method of projecting new permanent employment derives from the survey of firms at 444 and 595 Market, conducted by Planning Analysis & Development.[8] Those firms increased their number of employees an average of 13% when they moved to their new location. Based on this percent of increase plus maintenance employees (maintenance employees definitely represent new jobs), secondary employment multiplier effects of new permanent jobs would be about 140 jobs. Space vacated by existing San Francisco firms moving into the new office space may be occupied by other workers newly employed in San Francisco; these additional new jobs would also induce jobs through the multiplier effect, but no estimate of the magnitude of this effect is available. However, it is unlikely that the total number of employees moving into the vacated space would be much more than the number of employees moving into the new space; if so, then the size of the multiplier effect would be about double. The multiplier effect of permanent jobs would be long-lasting, while the multiplier effect of construction employment would only exist during the three years of construction.

As the input-output model is based on the Bay Area regional economy, employment impacts on San Francisco alone cannot be isolated in the above analysis. Another approach uses the estimate that each new permanent employee that is a San Francisco resident generates 0.6 secondary jobs in San Francisco, while each new non-resident employee generates 0.13 additional jobs in San Francisco.[9] This approach assumes that 100% of the net jobs at the project site would be new jobs. Using an estimate that 44% of the projected total employees would live in San Francisco,[10] about 300 secondary jobs in San Francisco would result from the net increase in permanent employment. The multiplier for construction workers is assumed to be larger than for permanent employees, as average wages for construction employees are higher. San Francisco residents employed as construction workers would generate 0.9 new jobs in San Francisco per worker, while non-resident construction workers would generate 0.33 new jobs in San Francisco.[11] Using an estimate that 45% of the construction workers would live in San Francisco,[12] about 240 secondary jobs in San Francisco would result from each year of construction. This number of secondary jobs cannot be broken down by sector as there is no

input-output model applicable to individual municipalities. Furthermore, the secondary employment estimate does not include expenditures by employers, which would increase the overall impact. In total, an estimate is that the project would result in about 1200 new primary and secondary permanent jobs in San Francisco, based on a simple net increase in employment. The project would also result in about 630 new primary and secondary temporary jobs in San Francisco for each year of construction.

Cumulative Impacts: From a cumulative perspective, the multiplier effects described above would support additional employment in San Francisco and throughout the Bay Area in a number of different industry and occupation groups.

Location of Employee Residences and Housing

Residence: The estimate of projected employee residence patterns using the projection methodology was found to be similar to the patterns of current employees: 44% in San Francisco; 27% in East Bay; 12% on the Peninsula; and 16% in the North Bay. The percent that would live in San Francisco is slightly higher than the 40% assumed in recent EIRs.[13]

Two recently occupied (at the time of the survey) office buildings in the Financial District, 444 and 595 Market, were surveyed in August, 1981, to determine empirically the proportion of employees who move to San Francisco as a result of the occupancy of a new building. For all employees surveyed in the two buildings, 87% did not move their residence, 6% made a move not involving San Francisco (for example, from Contra Costa to Alameda County), 4% moved to San Francisco, and 3% moved out of San Francisco. Thus, the net inflow to San Francisco was 1% of all employees, including those working for the firm before it moved, and new employees. As 444 Market had only been occupied one year at the time of the survey, it could be argued that not enough time had passed for employees to move. However, 595 Market (occupied for two years) had inflows similar to 444 Market. The survey studied only new office buildings, and could not include a survey of older existing buildings vacated by firms moving into the newly-bulit space. If these older buildings are more likely to be filled with newly established firms, expanding firms, and firms moving into higher priced office space, then there

could be more workers newly employed in the vacated space. And, from the survey, newly employed workers had a net inflow of 8%. Thus, the percentage of employees moving to San Francisco could be higher in the vacated space.

Housing: The increase in on-site employment could result in a housing impact in San Francisco. The San Francisco Department of City Planning in a memorandum entitled "Office Housing Production Program (OHPP) Interim Guidelines," January, 1982, assumes that the impact generated by a new project would be equal to the number of office employees multiplied by 40% (percentage of employees living in San Francisco as projected in recent Downtown EIRs) divided by 1.8 (the number of working adults occupying each housing unit). Applied to all 1461 office employees, the impact would be 325 units. Applied only to those 953 employees estimated to be new to the site (since of the 1461, 508 would return), the impact would be 212 units. Based on the assumptions in EE80.26, 101 Montgomery Street EIR, certified May 7, 1981, the impact would be between 157 and 313 units--using a range of 15% to 30% of employees expected to move to San Francisco and 1.4 workers per household. Applied to the 953 office employees new to the site, the impact would be between 102 and 204 units.

An analysis of new employees' ability to pay for San Francisco housing is presented in EE80.349, Spear and Main Street Office Building, certified May, 1982, pp. 102-103, and is incorporated by reference in this EIR. That analysis showed, among other things, that 100% of employees could afford the 1980 Census median rent, and about 17% would be able to purchase an existing single family residence. The purchasing ability of those who move to San Francisco as a result of a job in a new office building may or may not be represented by this data, depending on the incomes of such employees.

Cumulative Housing: Based on the cumulative total of 16.1 million gross square feet of net new office space which is now under construction, approved, or under formal review, the impact would be about 14,300 units, using the assumptions contained in OHPP Guidelines. Using the assumptions in EE80.26, 101 Montgomery Street EIR, certified May 7, 1981, the impact would between 6,900 and 13,800 units.

Fiscal Factors

Revenues: Gross revenue to the Port in 1985 would be $45,000 per month, for a total of $540,000 in 1985, under the terms of the proposed lease.[15]

Property taxes would not be paid by the project sponsor; however, possessory interest taxes would be paid based on the rent on the site divided by an appropriate capitalization rate, plus the cost of capital improvements escalated for increases in assessments.[16] In 1985, the economic rent paid by the sponsor to the Port would be the $540,000 described above. The capitalization rate is assumed to be 8%,[17] resulting in a value of $6,750,000. Construction costs of $105 million spread evenly over three years of construction with a taxable base escalated annually at 2%[18] results in a value of $108.5 million in capital improvements. Thus, total value subject to the possessory interest tax would be $115.3 million. At the current tax rate of $1.23 per $100, the $115.3 million of possessory interest would yield about $1,418,000 in possessory interest tax in 1985, paid to the City.

Based on revenues from existing parking, the current tax rate of 15%, and assuming a 10% increase in parking rates per year, the 375 parking spaces proposed at Pier One would yield about $48,340 in parking tax in 1985, paid to the City of San Francisco.

Payroll tax would be paid on earnings of about 1520 of the projected 1,850 employees at the site — employees of government agencies, banks, and insurance companies would be excluded, as such firms are not subject to the payroll tax under current rules. Payroll tax would also only be paid by firms with a tax liability in excess of $500 under current rules. Using current estimated average annual earnings of downtown office workers, assuming that earnings would increase at 10% per year,[19] and using the current payroll tax rate of 1.1% of total earnings, the returning and projected 15 firms subject to the tax with fewer than two employees[20] would pay no tax, as the liability would be $413. Firms with two employees would be above the threshold, with a liability of $826. The projected 17 two-person firms would generate about $14,040 in payroll tax. The projected firms with more than two persons for a total of 1,470 employees would generate about $607,520 in payroll tax. Thus, a total payroll tax of about $621,560 would be paid.

Sales tax revenues allocated to the City of San Francisco are currently 1% of taxable sales. Using data on downtown office workers, and assuming that expenditures would increase at the same rate as wages, the average worker at the site would be estimated to make $1,644 in taxable expenditures in 1985 in San Francisco. Sales tax revenues resulting from the expenditures of the 1,850 projected employees of the site would be about $30,400 in 1985. The State of California would receive about $152,070.

Sales tax revenues allocated to BART via the current 1/2% additional sales tax similarly would be about $15,200 in 1985. Of the 1/2%, 75% is currently received by BART, with the rest distributed by the Metropolitan Transportation Commission among BART, Muni, and AC Transit. Thus, BART would receive about $11,400 under the current allocation.

In addition to sales tax on expenditures of projected employees at the site, there would be sales tax generated by retail and restaurant sales at the site. The 150,157 square feet of retail and restaurant space would produce $58,590,000 (in 1981 dollars) in sales in 1985, based on estimated per square foot sales volumes developed by the sponsor's marketing consultant.[21] Assuming that expenditures would increase at the same rate as wages, about $857,820 in sales tax would be generated for the City of San Francisco, $4,289,080 for the State of California, and $428,910 by the additional 1/2% for BART in 1985.

The utility users' tax would be paid on water, gas, electricity, and telephone usage. Water consumption would be about 3,339,240 cubic feet per year, based on daily usage of 125 gallons per 1,000 square feet for offices and 200 gallons per 1,000 square feet of retail space and restaurants, per day.[22] Assuming that water rates would increase at 8% per year,[23] the usage at 0.563 cents per cubic foot would yield about $940 in 1985 at the current 5% tax rate. Gas usage would be about 200,460 therms per year. Assuming that gas rates would increase at 16% per year[24], the usage at $0.87 per therm would yield $9,590 in 1985 at the current 5.5% tax rate. Electricity usage would be about 8,352,590 kilowatt hours per year. Assuming that electricity rates would increase at 17% per year[25], the usage at $0.11 per kwh would yield

$50,530 in 1985 at the current 5.5% tax rate. Assuming that telephone rates would increase at 5% per year[26], and using a current estimate of $1.40 per square foot for the average annual telephone bill, 457,676 square feet would yield $39,090 in 1985 at the current 5% tax rate. Thus, the total utility users' tax would be about $100,150 in 1985.

The sponsor would pay a gross receipts tax on rental income. Gross income from the project is projected at $14,469,000 in 1985.[27] At the current tax rate of 0.22%, gross receipts tax of about $31,830 would be paid in 1985.

Based on tax rates in effect in 1981, total revenues to the City of San Francisco from the possessory interest tax, parking tax, payroll tax, non-BART sales tax, utilities tax, and gross receipts tax would be about $3,108,100 in 1985, as summarized in Table 23, p. 172.

Table 23

ESTIMATED REVENUES FROM THE PROPOSED PROJECT

Revenue Type	Recipient	Estimated Amount in 1985
Lease	Port	$ 540,000
Possessory Interest Tax	City	1,418,000
Parking Tax	City	48,300
Payroll Tax	City	621,600
Sales Tax on Expenditures	City	30,400
of Projected Employees	MTC	15,200
	State	152,100
Sales Tax on Retail and	City	857,800
Restaurant Sales	MTC	428,900
	State	4,289,000
Utility Users' Tax	City	100,000
Gross Receipts Tax	City	31,800

Source: Planning Analysis and Development

If the existing buildings were not rehabilitated, they would generate revenues of about $485,950 for the City in 1985: $32,880 in possessory interest tax, $44,080 in parking tax, $288,180 in payroll tax, $54,990 in non-BART sales tax, and $65,820 in utilities tax -- making the same assumptions made above for the proposed project.[28] The increase in revenues to the General Fund that would result from this project in 1985 would be

about $2,622,100. Revenues per square foot would go from $1.88 per gross square foot for the existing buildings to $6.80 per gross square foot for the project. (The per square foot estimates allow for comparison of different sized buildings and for relating revenues to service units provided.)

Costs: It is difficult to generalize about how costs for given levels of services would differ between the project and the existing uses on the site. Most available information suggests, however, that overall costs per unit of service (e.g., per hour of fire prevention) provided per square foot or per employee to the rehabilitated buildings would be lower than for the existing buildings. In examining government services provided directly to office buildings, it has been found that costs would grow more slowly than office space; for example, if office space grew 60%, police costs were estimated to grow at 28% and fire costs at 1%.[29] Discussions with service agency personnel regarding capacity and ability to provide services to the project[30] indicate that existing facilities, equipment, and labor could serve the increased activity proposed for the site without increases in labor or equipment. Similar findings have been presented in other EIRs. These discussions do not indicate that thresholds for increasing costs per unit of service would be reached. The difficulty of estimating costs is even further complicated here by three factors. This site is not within the Central Business District (CBD), which is the location of buildings analyzed in other EIRs, and thus findings about the downtown may not apply. Second, this site is publicaly owned, while most studies have focused on private development. Third, the Port now provides some of the needed public services. Thus, total costs for serving the site would increase because of the increase in floor space and employment; costs per unit of service per square foot, however, would not increase and may decline.

The General Fund currently provides a subsidy to Muni. At 1980-81 revenue and cost estimates, and under the assumption that with the new fare structure each daily Muni commuter would buy a Fast Pass, the peak hour per ride General Fund subsidy to Muni's operating budget would be $0.3866. Based on the projected tenants and employees, 33% of project employees would ride Muni to and from work.[31] The General Fund subsidy to Muni due to these riders would be about $111,030 in 1985,[32] expressed in 1980-81 dollars.[33] Two

factors are left out of the above analysis: (1) capital costs; and 2) cost of non-commute trips, such as employee day trips, business visitor trips, and retail customer trips. The proposed project would help offset the Muni deficit through contributions to the General Fund. In the 1980-81 budget, 7% of discretionary General Fund revenues were allocated to Muni. Seven percent of the $3,108,100 in General Fund revenue that would be generated by the proposed project would be about $217,570 in 1985. However, as there is no way to determine how General Fund expenditures would change if the project were not undertaken, it may not be appropriate to compare the costs to the revenues.

BART fares currently cover about 43% of BART costs. For each passenger trip an average of $1.00 is due to fares, and an additional $1.33 in costs must be supported by some other revenue source. Most of the additional cost is supported by the 1/2% BART sales tax. Based on the projected tenants and employees, 14% of projected employees would ride BART to work, and 13% from work.[34] The cost to BART that would not be covered by riders' fares would be about $155,450 in 1985,[35] expressed in 1981 dollars.[36] BART's direct revenues from sales tax generated by projected employees and by the retail space would be about $302,270 in 1985, expressed in 1981 dollars. BART's net gain as a result of employment and other activities at the site in 1985 would therefore be about $162,780, expressed in 1981 dollars.

Comparison of Changes in Costs and Revenues: On a per service basis, the project would probably increase revenues from the site more than it would increase costs, giving the project a higher revenue to cost ratio than do the uses existing on the site in 1981. However, because of the lack of adequate cost data and of the lack of an accepted methodology for apportioning costs, this conclusion is tentative.

If the project does have a beneficial fiscal impact, the benefits may only be temporary, because in the long term revenues from the project would increase at a slower rate than costs, due to Proposition 13 limitations on property tax increases, and therefore on possessory interest tax increases. However, certain other components of revenues may increase at higher rates, for example, retail sales.

Footnotes:

1. Gwaine K. Prom, Director of Financial Planning, Continental Development Corporation, telephone conversation, August 24, 1981, provided the $30 comparble rent figure used in the questionnaire.
2. For example, 81.104E, Montgomery-Washington Building EIR, certified January 28, 1982.
3. See Appendix G for a description of the employment projection methodology.
4. Based on earnings by occupation from U.S. Bureau of Labor Statistics, Monthly Labor Review, January, 1981.
5. Mart Jama, Construction Estimator and Project Manager, Swinerton & Walberg, telephone conversation, August 24, 1981.
6. University of California, Berkeley, San Francisco Bay Area Input-Output Model 1967 and 1974, July, 1978. The model requires sector specific inputs. For the construction multiplier effect, the construction sector was used; for the permanent employee multiplier effect, the sectors were estimated using the projection methodology explained in Appendix G. Note that recent EIRs on downtown office buildings seem to assume that all permanent employees are in the FIRE sector. See for example, 81.104E, Montgomery-Washington Building EIR, certified January 28, 1982.
7. When a new building is occupied some of the tenants move from other locations in San Francisco, some from outside San Francisco, and some tenants are new firms. Some firms are expanding or even contracting when they move. As firms move or expand/contract some jobs will be new jobs to San Francisco and some jobs will already exist.
8. For a description of the post-occupancy survey see Appendix G.
9. EE74.128, Bank of America Data Center EIR, Volume I, certified August 20, 1975, pp. 92-93.
10. See Appendix G for a description of the projection methodology.
11. EE74.128, Bank of America Data Center EIR, Volume I, certified August 20, 1975, pp. 94-95.
12. EE80.26, 101 Montgomery Street EIR, certified May 7, 1981, p. 80.
13. For example, Ibid., p. 293.
14. Ibid., p. 305.
15. Rent of $45,000 per month would be paid after the third year from the execution of the lease until 95% occupancy, which would be unlikely in the first year of occupancy in 1985; Development and Disposition Agreement, for the Ferry Building Complex, April 9, 1980.
16. Meeting with Sam Duca, San Francisco Tax Assessor, December 13, 1979. The cost of capital improvements are included here since the improvements would be made not by the Port but by a private developer.
17. Gwaine K. Prom, Director of Financial Planning, Continental Development Corporation, telephone conversation, August 24, 1981.
18. The maximum allowed under Proposition 13, which also covers the possessory interest tax.
19. Based on the increase in weekly earnings of finance, insurance, and real estate production or nonsupervisory workers from 1979 to 1980, U.S. Bureau of Labor Statistics, Monthly Labor Review, January, 1981.
20. Based on the Planning Analysis & Development survey of tenants and employees and on the projection methodology described in Appendix G. Firms with 1 employee, 1 owner, 1 owner and 1 employee, or 2 owners, are all included in the 15 firms with fewer than 2 employees.
21. Keyser Marston Associates, Inc., Ferry Building Market Potential, July 1981, p. 21.
22. Brown and Caldwell Consulting Engineers, Report on Wastewater Loading

from Selected Development Areas, 1972, cited in EE78.27, 101 California Street EIR, p. 78.
23. Based on increases in the Consumer Price Index for All Urban Consumers from 1979 to 1980, with 1980 the last full year for which data is available. U.S. Bureau of Labor Statistics, Monthly Labor Review, January, 1981.
24. Ibid.
25. Ibid.
26. Ibid.
27. Coopers & Lybrand, Ferry Building Project Financial Projections, July 17, 1981, Summary of Investment Results table.
28. Leases and licenses on which the possessory interest are based are assumed to increase at 10% per year, since that is the rate at which they have been increasing on the average, according to Thomas K. Yerkes, Deputy Port Director, telephone conversation, September 1, 1981. An increase of 10% per year is similarly used for the parking tax. The payroll tax is increased as for the proposed project. The non-BART sales tax and the utilities tax are also increased as for the proposed project.
29. SPUR, Impact of Intensive High Rise Development on San Francisco, 1974, pp. 201, 202, 214, 221, shows the relationship between cost and space. Also, Arthur Anderson, Inc., Downtown Highrise District - Cost Revenue Study, 1980, finds that revenues exceeded costs in 1976-77 and 1978-79. Other studies examining this question are compared in EE80.26, 101 Montgomery Street EIR, certified May 7, 1981, pp. 191-196.
30. See Appendix A, Initial Study, pp. A-15 to A-18.
31. See Appendix G for a description of the projection methodology.
32. To estimate the cost: 1,850 projected employees x 33% would ride Muni x 468 rides per year x $0.3886 deficit per ride = $111,030 per year.
33. While there are Consumer Price Index data to project fares into the future, producer price indices for intracity mass transit are not available to project costs into the future.
34. See Appendix G for a description of the projection methodology.
35. To estimate the cost: 1,850 projected employees x 13.5% would ride BART x 468 rides per year x $1.33 deficit per ride = $155,450 per year.
36. See footnote 33 above.

L. Marine Life and Water Quality

Marine impacts due to the project would occur as a result of adding and removing piles and deck, and dredging for the south tidal stairs. There would be a net increase of about 11,000 square feet of piles[1] as a result of adding 15,000 square feet of piles and removing about 4,000 square feet. Most of the increase would be due to the garage proposed for the Pier One bulkhead building extension. Marine impacts would also result from the addition and removal of decks over the piles. There would be a net decrease in deck area of about 17,200 square feet, primarily due to removing deck north of the Ferry Building. Overall, about 40,300 square feet of deck would be added and 57,500 square feet would be removed. The location of additions and reductions in piles and deck is given in Appendix B, pp. A-35 and A-36.

The proposed project would have short-term impacts on marine life and water quality due to pile driving and pile removal in the Bay. The project may involve a limited amount of dredging for the tidal stairs south of the Agriculture Building, which would require permits and approval of BCDC and the U.S. Army Corps of Engineers. The project engineers estimate that about 3,000 cubic yards of dredge material would be generated by constructing the tidal stairs.[2] BCDC could approve the work as minor fill to improve shoreline appearance. The Corps of Engineers, at its discretion, could approve the work with a letter of authorization, as the amount of dredge material would be less than 10,000 cubic yards.[3] If dredge and dredge disposal permits were not granted or if dredging and disposal were found to be too costly and time-consuming, the project engineer states that the tidal stairs could be constructed on piles, without dredging.[4]

During construction, dredging, pile driving and pile removal would temporarily alter the marine environment in the vicinity of Pier One, the Ferry Building and the Agriculture Building. Construction activities would alter bottom characteristics by changing the amount and type of bottom sediment and sediment deposition patterns, and suspending bottom sediment; increasing turbidity and nutrients; reducing dissolved oxygen; and altering water circulation patterns. On-site impacts could be reduced and in some cases eliminated if no dredging were proposed. Off-site impacts would be minimal if there would be no dredging.

Suspension of bottom sediment would result from the removal of existing piles for the Red and White Ferry slip, now located between the Ferry Building and Pier One; pile driving and drilling at Pier One, the Ferry Building, the Agriculture Building; and pile driving for the new Red and White ferry slip, to be located on the southern side of the BART platform. Resuspended sediment could affect filter-feeding organisms such as sponges and clams. The size of the suspended materials and the concentration and duration of exposure are the major factors affecting species response, and various species react differently to each. The duration of sediment resuspension would depend on the intensity and period of construction and the degree of tidal flushing. Sediment loads should return to previous levels after construction.

As the sediment load increases certain species of fish may avoid the area; however, this effect may be balanced by an increase in food resources as bottom sediments are disturbed. Population densities should return to previous levels after construction.

If dredging were to occur, spoils would be deposited at an approved disposal site, probably south of Alcatraz Island. Disposal of dredge material would not affect local water quality, as the dredge spoil area would be contained within sheet piles. As the likelihood of dredging is uncertain and as the amount of spoils would be small, off-site impacts of dredge material would be minimal; they are discussed in an attachment to the Harding-Lawson Marine Biota Study (June 1981); this attachment was prepared by Planning Analysis & Development; both the Marine Biota Study and the attachment are on file with the Office of Environmental Review.

Resuspension of toxic substances such as PCBs, pesticides, oil, grease and heavy metals could have long-term impacts until they settle back to the bottom of the Bay, into the mud. Tests prepared for the Port's five-year dredging program indicate that contaminant levels at 32 sampling stations on the San Francisco waterfront do not exceed EPA standards for open water disposal.[5] As the project would disturb bottom sediment, exposure of marine organisms to toxic substances could introduce the contaminants into the food chain where they would accumulate in higher life forms over time.

Turbidity (discoloration of water as light is blocked by added material) during construction could affect the microscopic plant life which serves as the basis of the marine food chain. The reduction or potential elimination of any population would decrease the overall productivity and nutrient export capability of the ecosystem. Any such impact would be temporary, as these plant species reproduce rapidly and could recolonize the area once turbidity declined to pre-construction levels.

An increase in nutrients may occur due to an increase of resuspended materials during project construction. Such increases can favor one group of organisms, such as algae, potentially causing such adverse effects as odors. Construction impacts on nutrient levels would be short-term.

A reduction in dissolved oxygen (DO) could occur during project construction as a result of bottom disturbance at the site. Also, disposal of dredge materials could affect DO levels at the disposal site. Reduced dissolved oxygen can affect the survival of many aquatic organisms.

Salinity and temperature of water at and near the site would not be affected by the project, either during construction or after occupancy. Water used during construction on land and over the Bay would be contained and drained into the sewer system for ultimate treatment and disposal. Some water would unavoidably enter the Bay due to spraying or leakage, but would not affect existing salinity levels or water temperature enough to affect biota.

Alteration of bottom characteristics through suspension of materials could result in more coarse-grained sediments in localized areas after construction, if finer-grained materials were to remain suspended and then be removed by tidal flushing. Loss of fine clay and silt would reduce the ability of the remaining sediment to absorb existing or future contaminants. This impact would be greatest in the vicinity of the southern tidal stairs where bottom disturbance would be concentrated. Changes in the composition of bottom sediment would tend to change the variety of habitats and food sources, thus affecting the potential number of species able to inhabit the area.

Pile removal and replacement due to construction would affect the amount and type of habitat available for colonization. The project would increase the amount of open water by 1.25 acres by removing platform fill. The removal and/or replacement of existing pilings would destroy attached organisms, such as mussels; however, similar plant and animal life would eventually be established on new piles.

Dredging or pile driving would destroy bottom life, but the new piles would provide a new solid surface area for recolonization by marine life. Removing 1.25 acres of platform fill and about 800 piles would create new habitat for bottom-dwelling marine life such as clams, shrimps, crabs and worms.

Overall, there would be a redistribution of certain species as bottom dwelling species are replaced by species that attach to piles and vice-versa. Intercommunity diversities would remain the same or increase slightly. The greatest change in the bottom environment would be at the tidal stairs; the impact would be less if the stairs were pile-supported rather than dredged and supported by a solid block of concrete.

Current patterns would change as removal of platform fill is expected to increase circulation in the area north and south of the Ferry Building. However, the addition of new piles at the Agriculture and Ferry Buildings could offset this increase. New piles under Pier One would reduce current velocities there, an effect which may be offset by increases in current flow near the Ferry Building, due to removal of existing platform fill.

Sediment deposition patterns around Pier One would not be extensively altered by changes in current velocities. Removal and addition of piles would not alter sedimentation patterns. The tidal stairs' curved form would reduce the tendency for sediment build-up near the Agriculture Building.

The Ferry Building Complex would not affect overall circulation patterns and wave action in the vicinity of the site. Improvements such as breakwaters would not be required.

Footnotes:

1. This number is the total increase in net cross-sectional area of piles resulting from the project. This represents the amount of surface water area that would be lost. This calculation was requested by BCDC.
2. Joe Buel, Peter Culley and Associates, Civil Engineer, telephone conversation, July 29, 1981.
3. Corps of Engineers Public Notice No. 78-1 (Final), p. 16, and Walter Thompson, Regulatory Functions Division, U.S. Army Corps of Engineers, Department of the Army, telephone conversation, July 30, 1981.
4. Joe Buel, Peter Culley and Associates, Civil Engineer, telephone conversation, July 29, 2981.
5. San Francisco Bay Regional Water Quality Control Board, Water Quality Control Plan for the San Francisco Bay Basin, April, 1975, p. 49.

M. Geology & Seismicity

All project buildings would meet the seismic requirements of the San Francisco Building Code. Pier One new construction must meet these

standards. While historic buildings need not meet the standards, the Pier One bulkhead building and the Ferry and Agriculture Buildings would be rehabilitated to meet code requirements.

The Ferry Building is seismically sound, but undergoes differential settlement. This could result in the existing building and the proposed 20-foot east extension settling at separate rates over time. If new structural loads were to be supported on existing friction piles embedded entirely in Bay mud, settlement would be further exacerbated.[1] New piles would be added under the Ferry Building to avoid differential settlement of old and new sections of the building. The building would be further stabilized by the addition of new floor slabs, poured in concrete around a steel bracing system. Roof trusses would either be strengthened or replaced by facsimiles to retain historic quality. The tower, which is presently standing independently, would be tied into the Ferry Building and thus made more seismically sound.

The Agriculture Building has undergone, and continues to undergo, differential settlement and is seismically unsound, exposing users to seismic and other hazards. Settlement has caused damage to the building structure. To arrest settlement, new piles would be placed on the land side of the seawall and the foundation would be repaired. A new steel bracing system would be provided to reinforce the walls and roof and to make the building seismically sound. Epoxy grout would be injected into existing large cracks and any new cracks created by construction.[2]

The pier would be seismically upgraded by adding about 175 piles to buttress the existing piles and another 175 to reduce the vertical loads on existing piles. The new piles would be driven through dense sand and stiff clay to prevent future pier settlement. To increase structural stability further, the pier deck would be reconstructed and stiffened to act as one structural element. The new building constructed on the pier would conform to the seismic requirements of the San Francisco Building Code, utilizing a steel bracing system.[3]

If a severe earthquake, such as the 1906 San Francisco earthquake of estimated Richter magnitude 8.3, were to occur along the San Andreas Fault,

violent groundshaking would occur.[4] However, settlement potential would be reduced because of the stability provided by the proposed new piles. The site is located in a zone in which brick and frame structures would be subject to cracking and could collapse.[5] It should be noted that the Ferry Building survived the 1906 earthquake, although it sustained some structural damage. The seismic upgrading proposed for the project as a whole should result in an improved ability to withstand seismic effects.

To ensure structural stability during an earthquake, the sponsor would authorize the structural engineer to prepare a dynamic analysis for proposed modifications to site buildings, and would follow the recommendations of the analysis. (To date, a preliminary static analysis has been done.)

The Engineering Criteria Review Board of the Bay Conservation and Development Commission (BCDC) would examine and report to the Commission upon the proposed project plans for seismic upgrading. The piles proposed for Pier One would be necessary to meet the seismic requirements of the San Francisco Building Code; however, they would have to be approved by BCDC as fill for non-water-related uses, such as offices.

Footnotes:

1. Harding-Lawson Associates, Phase I Geotechnical Engineering Services, Ferry Building Complex, The Embarcadero between Mission and Washington Streets, San Francisco, California, April 8, 1981, p. 10. This report is on file with the Office of Environmental Review.
2. Louis Prezetak, Structural Engineer, Peter Culley & Associates, telephone conversation, August 12, 1982.
3. Joseph G. Buel, Civil Engineer, State of California license 26129, Peter Culley & Associates, letter to John Kellogg, Port of San Francisco engineer, June, 1981. This letter is on file at the Office of Environmental Review.
4. Richter Scale: a logarithmic scale developed by Charles Richter to measure earthquake magnitude by the energy released, as opposed to earthquake intensity as determined by effects on people, structures, and earth materials.
5. URS/John A. Blume, "San Francisco Seismic Safety Investigation", prepared for the San Francisco Department of City Planning, June 1974.

N. Growth Inducement

The project would add 96,000 square feet of office space and 123,300 square feet of retail/restaurant space. Employment at the site would increase by about 890, from 958 to about 1,850. New occupants could include tenants relocating from other San Francisco locations, tenants that relocate from

outside San Francisco, or new firms. Therefore, the increase in employment at the project site would not necessarily be entirely new to San Francisco. If the building is fully leased, however, and the availability of its space would not create permanent vacancies in other San Francisco office buildings, total employment in San Francisco would eventually increase directly by about 890 jobs due to the project. Approximately 140 additional jobs would be indirectly supported through the multiplier effect, based on the proportion. This growth would respond to the continuing demand for office, retail and restaurant space in and near San Francisco's Financial District. This demand would exist whether or not the proposed project were built. The demand for office space continues the trend of strong growth in service sector and headquarters office activities and employment. This, in turn, generates demand for restaurant and retail space. The growth in office space and employment would contribute to the continued growth of local and regional markets for goods, services and housing.

Some new employees at the site or at sites vacated by firms moving to the site would desire to live in San Francisco if they do not now do so. However, some of the new jobs would go to persons who already live in the City, but either did not hold a job previously, or did not work in San Francisco. Likewise, some new jobs would be held by people who prefer to live in surrounding communities. The demand for housing in San Francisco as a result of the proposed project is estimated to range from about 210 to 325 units.

Any net increase in employment downtown would increase the demand for retail goods and food and other services in the area. By increasing office employees and at the same time increasing retail/restaurant space, the project would satisfy some of the demand for retail goods and food services.

Increases in employment in the project area would increase demand for business services, to the extent that the expanded space would not be occupied by firms providing those services. In response, demand would increase for existing space and possibly for further new development.

V. MITIGATION MEASURES

Throughout project planning and design, a number of measures were identified by the sponsor, the architects, planners and public agencies, to reduce or eliminate potentially adverse environmental effects due to the project. Mitigation measures that have been or would be adopted by the sponsor are listed below as Measures Proposed as Part of the Project. Other mitigations are under consideration by the project sponsor; would require implementation, cooperation or coordination with various public agencies; or would require public funding. Some measures that would reduce or eliminate potential impacts have been rejected by the project sponsor and are so noted. The Planning Commission could require implementation of a rejected measure or measures, as a condition of project approval. Mitigation measures are given below including current status and the party responsible for implementation. Measures discussed in the Initial Study are repeated below to provide a single section of the document for all mitigation measures.

A. Historic Resources

Ferry Building

MEASURES PROPOSED AS PART OF THE PROJECT

1. The Ferry Building would be preserved and restored. The City side facade and tower would be resurfaced to resemble the original finish; project architects would consult with Charles Hall Page & Associates to select restoration materials and methods. There would be no sandblasting to clean the exterior, as that would conflict with the Standards for Rehabilitation of the Secretary of the Interior. The arcades north and south of the central portal would be restored to give the City side facade a symmetrical appearance. Both arcades were altered from the original design, the north more so than the south arcade.

2. The southern arcade of the City side facade of the Ferry Building would be enclosed for shops. The design would attempt to maintain the appearance of a true arcade by setting clear window glass 10 inches behind the exterior face of the arcade so that shadow lines would give a sense of depth.

3. The project has been designed to conform to the Charles Hall Page & Associates Design Guidelines for Restoration and Adaptive Reuse of the Union Depot & Ferry Building where possible. For the Ferry Building, applicable guidelines which would be met include: a new Bay side facade that would reestablish the linear, uniform and rhythmic character of the building as a whole; and new interior public spaces (the atrium and galleria) that would recall the original nave of the building.

4. Historic features would be restored or returned to the building (e.g. roof trusses, decorative brick, skylight monitors). The Great Seal of California would be restored and moved to a prominent location in the Ferry Building.

5. The project sponsor would save historic elements that would be removed and donate them to interested preservation groups. If none were interested at the time of removal from the Ferry Building, the materials would be stored at the sponsor's expense for a period of two years. Such elements include the remaining half of the original grand staircase, the ground floor clathrix (decorative latticework in windows), and marble from the building walls.

6. Removal of additions to the building, particularly the cocktail lounge, World Trade Center sign, awning, canopies and air conditioners--all on or in the northern part of the building—would assist in restoring the Ferry Building to its original historic and architectural form.

MEASURES UNDER CONSIDERATION BY PROJECT SPONSOR

7. The proposed flat roof on the Bay side would not be consistent with the Charles Hall Page design guidelines. The project architects are studying the possibility of building a false gable profile to mitigate the effect on building form. The decision would be made during design development based on such factors as cost and construction considerations.

8. The square windows proposed for the north and south facade of the new wings would not be in keeping with the Page restoration guidelines. The sponsor has authorized the architects to study alternative designs for the windows. The decision would be made during design development based on cost and compatibility of the design with the proposed uses.

MEASURES REJECTED

9. The design impact of the proposed flat roof could be mitigated by elimination of the proposed fourth floor. The sponsor has rejected this measure as it would eliminate about 37,000 square feet of rentable space. In the sponsor's view, this rentable area would be needed to offset the cost of more than 60,000 square feet of public space in the atrium and galleria.

10. Ground floor clathrix could be retained. The sponsor has rejected this measure because it would impede access to the atrium and reduce views through the building to the Bay. The clathrix in the arched windows in the northern archway of the central portal could be reconstructed to match those above the southern archways, which would restore this facade. The project sponsor has rejected this alternative because it would conflict with the proposed large, open entrance designed to connect the atrium and The Embarcadero.

11. The fan windows on the north and south facades could be restored. The sponsor has rejected this measure because the proposed design calls for use of a single, large arch the full height of the building to serve as a main pedestrian entry portal on the north and south ends of the building.

12. The sponsors have rejected a glassed arcade, proposed by the Northeastern Waterfront Plan and the Total Design Plan, in favor of trees for the plazas north and south of the Ferry Building, because they feel an arcade would block more views, and that the trees would visually terminate the Ferry Building, shield pedestrians from The Embarcadero, and define the 200-foot-long spaces between buildings.

Pier One

MEASURES PROPOSED AS PART OF THE PROJECT

13. The project would retain and restore the exterior of the Classical Root, Renaissance style bulkhead building, although new openings in the facade would be necessary. The sponsor would consult with the Landmarks Preservation Advisory Board regarding these alterations.

Agriculture Building

MEASURES PROPOSED AS PART OF THE PROJECT

14. The project would save three facades, to be carefully protected by bracing and underpinning. Structural engineers experienced in historic preservation would be present on-site to supervise the work. The three facades would be cleaned and restored. Although there is little historic or original material on the building interior, the sponsor would have the contents evaluated by a qualified architectural historian, in consultation with the Landmarks Preservation Advisory Board and the Foundation for Preservation of San Francisco's Architectural Heritage, for possible salvage and relocation.

15. The sponsor would implement photo documentation of the building according to either the Historic American Building Standards or Historic American Engineering Record, established by the National Park Service. Measured floor plans and a history of the building would be compiled and distributed to local and national libraries. In addition, a plaque would be mounted on-site, commemorating the building and its history.

16. The Bay side addition would be made of new bricks fabricated to resemble the old.

B. Archaeology

MEASURES PROPOSED AS PART OF THE PROJECT

17. Should evidence of cultural or historic artifacts of significance be found during project construction the Environmental Review Officer and the President of the Landmarks Preservation Advisory Board would be notified. The project sponsor would select an expert archaeologist to help the Office of Environmental review determine the significance of the find and whether feasible measures, including appropriate security measures, should be implemented to preserve or recover such artifacts. Construction which might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendation and retrieval, if appropriate.

C. Public Pedestrian Access, Recreation and Open Space

MEASURES PROPOSED AS PART OF THE PROJECT

18. Renovation of the Ferry Building, the Agriculture Building, the Pier One bulkhead and removal and replacement of platform fill would halt deterioration of public property on the Northern Waterfront, and encourage public use of the site.

19. Pedestrian walkways, waterfront plazas, the galleria and tidal stairs would all be connected with The Embarcadero Promenade and would encourage public use of the site for walking, sitting and viewing, shopping, dining and public events.

20. The sponsor would provide street furniture, lighting, planting, decorative paving and other amenities including public access signs, in cooperation with the Department of City Planning and BCDC, to improve the pedestrian environment on the site.

21. The project sponsor would provide public restrooms in the buildings.

22. The outdoor restaurant proposed for the east end of Pier One could cause conflicts between restaurant patrons and persons using the public open space at the end of the pier. The sponsor would follow the recommendations of design studies to delineate private and public areas while providing both groups with a view of the water and minimizing awareness of each other. This could be done by changing the elevations and by landscaping. Alternatively, the restaurant space could be confined to the southeast end of the pier while the public space could be provided at the northeast end. However, the northern end would be less sunny, and such a division would interrupt continuous public access to the shoreline, a public policy goal of both the City of San Francisco and BCDC.

MEASURES TO BE IMPLEMENTED BY PUBLIC AGENCIES

23. Removal of The Embarcadero freeway would improve public access to the waterfront and shoreline appearance, and increase views of the Bay. The state agency responsible for this action would be Caltrans. This measure would restore the visual prominence of the landmark buildings as seen from

Market Street and other downtown viewpoints. This measure is under study. A decision is expected by the end of 1983.

24. A major public plaza in front of the Ferry Building is proposed in the Northeastern Waterfront Plan. If built, this plaza would improve access to the site, improve shoreline appearance and emphasize the Ferry Building's prominence, particularly if done in combination with removing the freeway. This proposal would require realignment of The Embarcadero in front of the Ferry Building. The Port, Caltrans, the Department of Public Works and the City Planning Department would be responsible for implementation of this measure.

F. Urban Design, Visual Quality, and Views

MEASURES PROPOSED AS PART OF THE PROJECT

25. The sponsor would collaborate with the Port, BCDC, the City Planning Commission and other public agencies on a coordinated program of streetscaping for the site and the surrounding area. The street lights, furniture, and plant material for the project should be suitable for a maritime setting, and should be continued throughout the northeastern waterfront. The sponsor would continue design efforts to assure appropriate and consistent landscaping and streetscaping throughout the site and site area.

26. Visual quality of the site area would be improved by building rehabilitation and restoration, removal of surface parking, creation of pedestrian promenades, plazas and by other public amenities inside project buildings.

27. Views of the waterfront would be improved by removal of about 350 surface parking spaces on and around the site, by returning more than an acre of surface fill to open water, and by providing landscaped open space and other public amenities.

28. The view of the waterfront from Market Street would be improved due to the transparency of glass proposed for the atrium and the skylights. The Bay would be visible through greater portions of the buildings.

29. The project would include London Plane trees in public areas north and south of the Ferry Building, pruned and spaced to minimize obstruction of views of the water. The sponsor would have the trees contract-grown to near maturity prior to installation. The trees would help mitigate the impacts of The Embarcadero traffic on these public spaces.

30. To reduce glare, the sponsor would prohibit use of shiny materials on roof surfaces and facades. There would be no mirrored glass on the skylights or facades.

31. To mitigate the potential impact of flourescent light at night, the sponsor would require most fixtures to be turned off after 11 PM.

MEASURES REJECTED

32. The sponsor has rejected changing the pitch angle of the skylights to reduce glare, as the proposed angle would be the same as the original Ferry Building roof angle. The architects believe that different pitch angles would look awkward, appear inconsistent with the original building form, and destroy historic character.

33. The sponsor has rejected use of wood planking, recommended by the Northeast Waterfront Plan for the site area, in favor of brick paving which would be coordinated with that on Market Street, in the belief that brick would be more durable and easier to maintain.

G. Transportation

MEASURES PROPOSED AS PART OF THE PROJECT

34. The sponsor would require service vehicles to make deliveries at designated hours when pedestrian activity is low, such as between 6 and 10:30 AM, to mitigate potential pedestrian/vehicular conflicts.

35. For on-site deliveries, the sponsor would follow the recommendations of studies for service and delivery schemes that would utilize small, electric carts, to reduce vehicle hazards to pedestrians.

36. The sponsor would work with the Port and restaurant operators, in consultation with the Department of City Planning, the Department of Public Works, and the BCDC, to develop a service vehicle and valet parking program for the site. The sponsor would follow the recommendations of a study regarding means to control delivery vehicle access to restaurants, which generate the greatest frequency of delivery trips. This could be done with gates and guards, provided and operated by the project building management.

37. The sponsor would provide for a Port police officer to monitor service vehicle parking and enforce the restricted on-street parking hours for such vehicles and to regulate queuing at the garage to avoid blocking traffic lanes on The Embarcadero.

38. The sponsor would follow the recommendations of design studies to develop landscape and paving that would distinguish pedestrian and vehicle areas and discourage joint use, as a means of minimizing potential conflicts.

38. Plazas and widened sidewalks would be added along The Embarcadero, which would reduce conflicts between joggers and vehicles. The sponsor would cooperate with the Port and other public agencies to develop a plan for bicycle and jogging paths along the waterfront, separate from pedestrian ways.

40. The project sponsor has agreed to designate a transportation broker on the building management staff to be responsible for disseminating transit information (route maps, schedules), selling transit passes and tickets for BART, Muni, and AC Transit, and coordinating ride sharing and vanpooling. A list of potential carpool and vanpool users and destinations would be maintained to encourage ride sharing. The transportation broker would cooperate with RIDES, Inc., the ridesharing program sponsored by Caltrans and the Metropolitan Transportation Commission.

41. The sponsor would structure management and lease agreements with tenants to encourage use of flex-time scheduling, to reduce traffic at peak hours. Building hours of operation would allow early morning or late night work. The mix of uses proposed by the sponsor would have a transit effect similar

to flex-time, as 68% of site employees would be office workers who would arrive and leave during the peak hours and 32% would be restaurant and retail workers who would arrive and leave during off-peak hours.

42. The sponsor would provide racks for bicycle and motorcycle parking at a secure location on the site.

43. The sponsor would control the parking rates in the Pier One garage to encourage short-term use only, oriented toward patrons of the project's retail and restaurant facilities. Monthly parking spaces would not be leased. Carpool and vanpool spaces for project employees would be available in the garage.

45. The sponsor would maintain clear areas on the site near all crosswalks to assure easy pedestrian movement and will control the location of news racks, garbage cans, and other obstacles by specifying appropriate locations for them in the final design plan. Major building entrances would be located at crosswalks, which would minimize jay-walking across The Embarcadero.

44. During the afternoon hours, all construction truck traffic would be required to enter or exit the site before 4 PM, to avoid conflicts with PM peak-hour vehicular traffic. The project sponsor would meet with the Traffic Engineering Division of the Department of Public Works and with the Office of Environmental Review to determine additional feasible construction traffic mitigation measures which would be satisfactory to all parties.

46. Construction activity, especially truck movements, would be scheduled so as not to coincide with ferry unloading times, particularly during the AM commuter peak to avoid pedestrian-truck conflicts.

47. Within a year of full occupancy of the project, the project sponsor would conduct a survey, in accordance with methodology approved by the Department of City Planning, to assess actual trip generation patterns of project occupants and actual pick-up and drop-off areas for carpools and vanpools. The project sponsor would make this survey available to the Department. Alternatively, at the request of the Department, the sponsor would

provide a fair and equitable in-lieu contribution toward an overall transportation survey for the downtown area to be conducted by the City.

MEASURES UNDER CONSIDERATION BY PROJECT SPONSOR

48. If the sponsor developed a plan for off-street loading, the project would not require a variance from the Planning Code. Depending on the location of loading spaces, this measure could conflict with plans and policies for service and goods delivery parking and for plazas and open space for the site (for example, the policy regarding a major plaza west of the Ferry Building). The project sponsor is working with the Department of City Planning and BCDC staff to develop a plan that would include off-street loading and respond to the applicable plans and policies. The Planning Commission could require an off-street loading plan.

MEASURES REJECTED

49. The north part of the City side arcade of the Ferry Building could be open, as the southern part now is, for use as a bus shelter, waiting and pedestrian area. The project sponsor has rejected this measure, believing the interior atrium would be open and could be used for these activities.

50. Transit shelters, equipped with amenities such as telephones and benches, could be installed as appropriate on the site. The project sponsor has rejected this measure as seating and telephones would be available on the site and within the buildings.

51. Eyebolts or similar fixtures could be affixed to building facades for the suspension of Muni overhead trolley wires. The project sponsor has rejected this measure in the belief that such fixtures would detract from the restoration of these landmark buildings.

52. Free or reduced cost transit passes could be provided to project employees to encourage transit use. The project sponsor has rejected this measure as too costly and more appropriately the responsibility of individual tenants to their employees.

MEASURES TO BE IMPLEMENTED BY PUBLIC AGENCIES

53. To improve pedestrian access and reduce hazards, the Department of Public Works could adjust the traffic signal timing for pedestrian crossing in front of the Agriculture Building at the intersection of Mission Street and The Embarcadero. The length of the signal time could be doubled to 80 seconds and a flashing "Don't Walk" pedestrian signal phase provided.

54. Pedestrian access to the site and pedestrian level views could be improved by removing parking under The Embarcadero freeway, including the Market Street view corridor, and by constructing the wide crosswalk proposed by the project architects. The Port would be responsible for this measure.

55. To increase transit use at the site, Muni could route a Market Street bus to the central entrance of the Ferry Building under the clocktower, creating a loop connecting Market Street, the project site and surrounding waterfront.

56. The project sponsor would prepare an on-street parking plan for service and delivery vehicles--including the location of yellow, green, white, blue and red curbs--in consultation with the Port, the Departments of City Planning and Public Works, and the Police Department. The Department of Public Works would be the implementing agency.

57. Long-term parking could be discouraged by conversion of the remaining long-term spaces controlled by the Port in the project vicinity to short-term use. The Port would be responsible for implementing this measure.

58. Reconstruction and realignment of the section of The Embarcadero roadway from Bay Street south to Broadway would implement the Northeast Waterfront Survey and enable reconstruction to progress from Broadway to Berry Street. The Port would be responsible for this measure.

59. Additional park and ride lots could be provided in suburban transit corridors to encourage use of transit to the site. Such lots are presently provided around some BART stations. Building additional lots would require action by a number of public agencies (such as AC Transit, BART and city and county governments in the areas around San Francisco.

F. Noise

MEASURES PROPOSED AS PART OF THE PROJECT

60. The sponsor has agreed to follow the recommendations of a detailed acoustical analysis to be prepared for the project, to determine measures to reduce interior noise levels and to incorporate noise insulation features in the proposed design.

61. The sponsor will require by contract that the construction contractor comply with San Francisco Noise Ordinance Sections 2908 and 2909, which limit noise levels during evening and night-time hours. The project contractor would muffle and shield intakes and exhausts, shroud or shield impact tools, and use electric-powered rather than diesel-powered construction equipment when possible, as determined by the Department of Public Works. If double-shift construction is proposed by the sponsor and approved by the Department of Public Works, noise-reducing equipment would be used. With state-of-the-art noise muffling equipment, jackhammer noise, for example, could be reduced 13 dBA from 88 dBA to 75 dBA.

G. Air Quality

MEASURES PROPOSED AS PART OF THE PROJECT

62. During demolition, there would be an increase in airborne dust and particulate matter. To mitigate the potential impacts, the sponsor would require the contractor to water down concrete dust and other debris at least once a day. This would reduce dust generation by 50%. The phased demolition and construction program would increase the period over which dust would be generated, but would lessen its intensity at any one time.

H. Energy

MEASURES PROPOSED AS PART OF PROJECT

63. The sponsor would attempt to comply with the Title 24 energy conservation standards of the State of California for the project as a whole, although historic structures such as the existing site buildings are exempt from Title 24.

64. Site buildings would have upgraded mechancial and electrical systems to reduce energy consumption per square foot from present conditions.

65. Buildings would be naturally illuminated through skylights, and public gallerias would not be artificially cooled; this would lower energy consumption and costs. The proposed heating, ventilating and air conditioning system would operate on an economizer cycle that would use outside air for indoor cooling. Office and retail facilities would have independent lighting and heat controls.

I. Employment, Housing and Fiscal Factors

MEASURES PROPOSED AS PART OF THE PROJECT

66. The sponsor has agreed to notify site occupants six months in advance of rehabilitation work that they must relocate. The sponsor would encourage world trade-related firms in the Ferry Building to occupy Pier One. Ferry Building tenants with long-term leases would be guaranteed space in the project after rehabilitation; it has not yet been determined whether they would have to be temporarily relocated, could remain in their present space during construction, or whether they would stay given new rents.

MEASURES UNDER CONSIDERATION

67. The sponsor is considering offering relocation assistance to long-term leaseholders, in the event that they must temporarily relocate during project construction. The decision would be made after construction schedules have been finalized and would be based on such factors as cost and the availability of alternative space acceptable to the leaseholders.

MEASURES REJECTED

68. The proposed project would generate a demand for between 210 and 325 housing units based on the formula developed by the Department of City Planning. To satisfy the demand for housing associated with employment growth due to the project, the sponsor could build, or cause to be built, between 210 and 325 new housing units in the City; rehabilitate, or cause to be rehabilitated, existing substandard housing units; and/or contribute to a housing development fund or similar program for an equivalent number of units. Several of these measures could be implemented by the project sponsor's participation in the City's Office Housing Production Program. The sponsor has not agreed to provide this housing because the site and site buildings are

publicly-owned and would be leased by the sponsor from the Port. Revenues to the Port from the project would be based in part on profits. If housing were required to be built, initial profits could be reduced and Port revenue reduced correspondingly.

69. The sponsor could guarantee to those existing tenants without long-term leases suitable office space in the project during rehabilitation of their space, payment of moving expenses, or other financial assistance. These measures have been rejected by the sponsor as costly and beyond the provisions and obligations of its lease agreement with the Port, and because most tenants are on month-to-month leases which the Port has priced at below market rates due to the expected rehabilitation.

J. Marine Life and Water Quality

MEASURES PROPOSED AS PART OF THE PROJECT

70. The sponsor would contractually require the construction contractors to contain demolition and construction debris.

71. New construction would allow better control of roof gutter runoff and would prevent its direct entry to the Bay. Open water pipes under the Ferry Building presently drain directly into the Bay; this impact on water quality would be eliminated due to new, more efficient plumbing and drainage for the entire project.

K. Geology and Seismicity; Hazards

MEASURES PROPOSED AS PART OF THE PROJECT

72. The Ferry and Agriculture Buildings and the Pier One bulkhead building would be brought up to the seismic standards of the San Francisco Building Code (as historic buildings, they need not conform to these standards).

73. The structural system at the Ferry Building would be made more stable by tying the tower into the western portion of the building, as the tower is presently standing independently. This would make the tower more seismically sound. The project would seismically upgrade Pier One by adding about 175 piles to buttress the existing piles and another 175 to handle the vertical loads on the existing piles. The new piles would be driven through dense

sand and stiff clay to prevent pier settlement in the future. To increase structural stability further, the pier deck would be reconstructed and stiffened to act as one structural element.

74. Although the structural engineers recommend demolition and reconstruction at the Agriculture Building, the sponsor has agreed to preserve the west, north and south facades, and to make them seismically sound. The building would be surveyed prior to rehabilitation to provide benchmark data against which destabilization could be noted. Upgrading would be done by bracing the walls inside and out, drilling caissons every ten feet, underpinning the wall, inserting grade beams across the foundations and levelling the building. The foundation would be repaired, making the walls stable. New piles would have to be installed under the rest of the building, requiring removal of the roof to drive them. If possible, the roof tiles would be removed intact and reused on the building. The new piles would provide a stable base for the interior structural system. The historic facades would be cross-braced for structural stability, as this would be necessary even with the new interior columns and beams. Epoxy grout would be injected into existing large cracks and any new cracks created by construction.

75. To avoid project-induced subsidence at the clocktower or the Agriculture Building, the sponsor would monitor ground elevations during construction, by means of weekly observations. If uneven subsidence were noted, construction would be halted until an appropriate method to stop it could be determined. Should minor subsidence occur, the sponsor would agreed to resurface the affected area. Cracked walls would be resurfaced and/or patched.

76. The Ferry Building is undergoing moderate but consistent differential settlement which could be increased by the proposed new addition to the Bay side facade. To mitigate this potential impact, new piles would be driven through the mud to dense sand and clay below elevation -130.

77. The sponsor would hire a California-licensed geotechnical consultant prior to construction, to analyze potential geotechnical impacts. The sponsor has agreed to follow the recommendations of the geotechnical consultant for foundation repair, pile placement, site preparation and construction.

78. To ensure structural stability during an earthquake, the sponsor would authorize the structural engineer to perform a dynamic analysis for proposed modifications to site buildings. To date, only a preliminary static analysis has been done.

79. An evacuation and emergency response plan would be developed by project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to insure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project's plan would be reviewed by the Office of Emergency Services and any features that must be included as part of building construction would be implemented by building management before the Port issues the final building permit.

L. Public Services

MEASURES PROPOSED AS PART OF THE PROJECT

80. If the PT&T cable must be moved, the sponsor would study means to minimize impacts on communication services by cutting the deck of Pier One sequentially to maintain an area across which the PT&T cable could be slung. This would eliminate the need for service reduction or cable relocation as the conduit would be moved throughout construction. Implementation of this mitigation would require the cooperation of PT&T.

81. The project would have an electronic security system and security personnel.

82. The project would include at least two trash facilities, including compactors. One would be in the Agriculture Building, and the other would be either in the Ferry Building on Pier One, depending on final design.

Footnotes:

1. Tom Yerkes, Deputy Port Director, Administration and Finance, telephone conversation, August 28, 1981.

VI. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROJECT IS IMPLEMENTED

Land Use: The project would result in more intensive use of the Northeastern Waterfront than is currently taking place or is planned by the City Planning Commission under the present Comprehensive Plan and the Bay Conservation and Development Commission under the San Francisco Bay Plan. The project would require changes in the Total Design Plan and amendments to the Northeastern Waterfront Plan of the Comprehensive Plan and the Special Area Plan No. 1 of the Bay Plan.

Historic Resources: The project would remove or demolish the east facade, roof and interior of the Agriculture Building. All exterior walls (except for the west, north and south facades) , the tile roof, and the interior structure and partition walls would be demolished and removed.

Transportation, Circulation and Parking: At full occupancy, the project would result in a net on-site surplus of 259 short-term parking spaces and a net on-site deficit of 462 long-term parking spaces. The deficit in long-term spaces could result in greater trip lengths, air pollution and fossil fuel consumption as drivers search for parking spaces. Alternatively, the deficit could result in modal shifts, including use of transit facilities that are already at capacity levels.

The project would contribute to cumulative impacts on Muni and other transit agencies; the project itself would increase transit ridership and transit loading by up to 1% on certain Muni lines during the peak hour.

Noise: If double-shift construction is proposed and approved, noise, especially that associated with impact equipment, would interfere with leisure activities and sleep in residential and hotel uses in the project area.

Employment, Housing and Fiscal Factors: According to the City's housing formula, the office portion of the project would generate a demand for between 210 and 325 dwelling units in San Francisco.

VII. ALTERNATIVES TO THE PROPOSED PROJECT

A. No Project

Description: The no project alternative would mean no change to the site as it now exists. The three buildings and the open spaces around them would remain in their present condition, as described in Environmental Setting, pp. 28-35. None of the impacts associated with the project would occur.

Environmental Considerations

If the project or another similar rehabilitation plan were not undertaken, Northeastern Waterfront Plan policies would not be implemented; neither would Plan amendments be necessary. The Ferry Building would not be rehabilitated as advocated by the Port of San Francisco, the Page design guidelines, the Special Area Plan No. 1, the Northeastern Waterfront Plan and the Total Design Plan. Original historic building material would not be removed. The Agriculture Building would not be rehabilitated and original material and later additions would not be demolished. The Pier One bulkhead building would not be rehabilitated and the shed would not be demolished. Other, more intensive, development could be proposed, as an indirect result of not undertaking this project, resulting in less restoration of the historic structures on site. Or, less intensive development could be proposed including piecemeal development on the site in three separate projects.

Public access to the waterfront would not be increased and access to ferry boats through the Ferry Building would not be improved. The Embarcadero Promenade is expected to add 500 peak hour pedestrian and jogging trips to the site which could result in about 50 more pedestrian/vehicle conflicts than there are at present. With this alternative, the proposed wider sidewalks and plazas along The Embarcadero would not be built. Surface parking would not be removed from the site.

There would be no change in noise levels near the site, no disturbance of marine life, and no change in local air quality or energy consumption on-site with this alternative.

Without the project, there would be no relocation of site tenants and no increase in demand for housing in San Francisco due to additional office space.

Pier One and the Agriculture Building would not be seismically upgraded, with the result that existing potentially hazardous conditions would continue. The Ferry Building tower would not be made more seismically sound although the degree of existing hazard is not now known.

A comparable mix of uses might be developed at another site within or outside San Francisco, with comparable project impacts related to specific site conditions.

Reasons for Rejecting This Alternative

The project sponsor has considered and rejected the no project alternative because the sponsor has committed resources to the development and because the proposed development is dependent on the specific buildings and the location of this site.

B. Restoration Alternative

B-1. Full Restoration Alternative

Description

Ferry Building: This alternative would restore the building to its original condition, as built in 1898, and fully comply with the Charles Hall Page & Associates Design Guidelines for Restoration and Adaptive Use of the Union Depot and Ferry Building (1978). The main differences between this alternative and the proposed project would be that the building would not be extended to the east(including the proposed north and south extensions), the southern half of the City side arcade would not be filled-in, and the interior spatial configuration would be different. For a more complete description of the Ferry Building's physical characteristics and the impacts of the proposed project on historic and architectural features, see the Environmental Setting (pp. 48-56) and Environmental Impacts (pp. 99-109) of this report.

Inside the building, the nave would be restored with this alternative. It would run the length of the building and would extend upward only from the second floor up to the roof. With the project, the proposed galleria would extend upward from the ground floor to the roof. The second floor would be the main public space, as it was when used as a waiting room for ferries. This alternative would thus recreate a space that would allow the split grand staircase to be restored, and the Great Seal of California to remain in its original location. The central entry portal would be restored with clathrix. The northern half of the City side arcade would be opened up by removing the existing offices, recreating a symmetrical appearance. If the nave were restored, the proposed central atrium--which would open the building from the ground floor to the roof--could not be built.

Marble lining the walls of the nave and the grand staircase would remain in the building and, where removed, would be restored. The original skylights would be restored, resulting in less glazing on the roof than the proposed design. The second floor gallery overlooking the Bay would be recreated and the third floor added in 1927 would be removed to lower the trusses that were raised at that time. It should be noted that the Charles Hall Page guidelines would allow the retention of the third floor.

The Bay side facade would be restored with arched windows, an arcade and a stepped-down profile with reduced building mass toward the water. The north and south facades would be restored to the original fan window design and would have entrances through the second longitudinal bay, the original location of the nave. The north and south facades could also be replaced with glass pavilions--design elements more in keeping both with the Ecole des Beaux Arts style of architecture and with A. Page Brown's sketch plans. (See page 104 of this report for further discussion of this issue.)

The Agriculture Building: Full restoration of the Agriculture Building would include saving both the 1915 and 1918 portions of the building, interior marble and staircase, and restoring the interior spatial arrangement, including the mezzanine overlooking the former postal area. The original design of the Agriculture Building is described on pp. 54-55 of this EIR. The main

retention of the 1918 addition, which would conflict with policies of the Northeastern Waterfront Plan and the Total Design Plan. Alternative preservation approaches for the Agriculture Building are described in Section B-2, pp. 205-207, of this chapter.

Pier One: The main characteristics of full restoration of Pier One would include keeping the pier shed, maintaining the bulkhead building with its existing envelope and maintaining the appearance of the west facade. Auto entry and exit portals would not be cut into the west facade, and the bulkhead building would not be extended 20 feet east, as in the proposed project. However, windows would have to be cut into the shed to develop it for any use other than parking. An alternative design approach for Pier One is described in Section C, pp. 208-209, of this chapter.

Environmental Considerations

Ferry Building: Some or all of the above restoration would preserve the Ferry Bbuilding in a manner recalling its historic use and appearance on San Francisco's waterfront.

The Ferry Building would not be extended eastward over the Bay as proposed with the project. About 7,000 square feet of deck would not be added on piles over the Bay. About 44,500 square feet of building space would not be added over the Bay on top of platform fill. Without the proposed north and south extensions of the Bay side addition, the open area on each end of the building would be larger. Restoration of an open west arcade would allow this space to be public rather than filled in with shops.

Agriculture Building: Full restoration of the 1918 portion of the Agriculture Building would conflict with the Northeastern Waterfront Plan which calls for its removal. Restoring this portion of the building would preclude an open plaza along the east side of the building, as would the project, unless additional fill were authorized by BCDC. Maintaining both the 1915 and the 1918 portions of the building would preclude a direct connection between The Embarcadero Promenade and the rest of site, proposed with the project through the building galleria.

If the building were fully restored, the height of the Agriculture Building would be less than the proposed project height with the skylight. Assuming the existing floor area of the Agriculture Building approximates that of the original building, full restoration would result in about 16,000 square feet of space less than the proposed project in this building. All of the building would be used for offices, and the food hall and galleria would not be provided.

Pier One: If Pier One were fully restored, it would have to be seismically upgraded, as for the proposed project. The shed would be preserved: if used for parking, its exterior would not be changed; if used for offices, windows would have to be cut to admit light and air. The bulkhead building would not be extended eastward onto the pier and the west facade would be maintained in its present form. Overall, a fully restored Pier One would accommodate about 72,000 square feet of office, as the vertical clearance within the shed is not adequate for two floors. If used for parking, about 230 spaces would continue to be provided on one level in the shed. Public access would be restricted to the periphery and no public open space would be provided at the east end of the pier. The plaza proposed for the west end of the pier, opposite the bulkhead building would not be provided.

Reasons for Rejecting the Full Preservation Alternative

The sponsor has rejected this alternative in the belief that the proposed design would retain, restore or recreate original and historic features of the building. The sponsor has rejected any restoration action that would result in a reduction of rentable area because of the high and uncertain costs of rehabilitation, because the uses proposed would not be compatible with full restoration, and because of the amount if nonrevenue-producing open space that would result.

B-2. Partial Restoration Alternatives for the Agriculture Building

Description

For each partial restoration alternative discussed below, there would be little or no change in impacts compared to the proposed project except for preservation and visual effects because land use, and building siting, size and form would be similar to the proposed plan. Sub-alternatives include:

(a) Preservation of the entire two-story, 1915 block of the Agriculture Building fronting on The Embarcadero;
(b) Removal of the major facades, storing them, rebuilding the foundation and interior structure and reinstalling the facades;
(c) Relocation of the entire building and construction of a facsimile on the site;

Environmental Considerations

Partial restoration alternative (a) would differ from the proposed plan in that the entire 1915 "palazzo" would be saved and rehabilitated, rather than only the facades. The west, north and south walls would be saved as would the east roof. The eastern portion, which was part of the original construction, would be demolished, as would the 1918 addition and replaced with new construction similar in size, scale and material to the portion that would be retained, as in the proposed plan. If the entire 1915 block were saved, the building could not be made level and stabilized because there would be no way to reach the piles under the interior of the building. If this part of the building were not stabilized with new piles, the proposed addition could not be joined to the palazzo. The skylight proposed in the project could not be included in this alternative, as it could not safely span the old and new structures, according to project engineers.

Under the partial restoration alternative (b), the west facade and north and south walls would be removed from the site, in pieces or as whole wall sections, and stored while foundation work and a new structural frame were built. This would involve demolition of other portions of the building, as in the proposed plan. The historic facades would be reinstalled. Walls could crack or crumble during removal, transport or reinstallation. This potential impact may be off set by spraying epoxy glue inside the building walls to act as a strengthening agent.

With partial restoration alternative (c), the entire two-story, 1915 portion of the building would be permanently moved to another location, and the rest of the building demolished as in the proposed plan. A replica of the 1915 block would be constructed, and the Bay side portion would be the same type

of design and construction as the proposed plan. This alternative would involve the same dangers associated with moving the building as noted above. This alternative would mitigate many impacts on the historic character of the architecturally meritorious portion of the building, if the move were successfully carried out. The 168-foot width of the building would prohibit a long move, unless it could be moved in sections narrow enough to fit City streets. A suitable site has not been sought.

Reasons for Rejecting Partial Preservation Alternatives

The sponsor has rejected partial restoration alternative (a) because stabilizing the building would require removal of the roof and drilling new piles to bedrock. This would destroy both the tile roof and the interior of the structure.

The sponsor has rejected partial restoration alternatives (b) and (c) because of the cost of moving all or portions of the structure, the chances for damaging the building in transit, and the lack of a suitable relocation site nearby.

The sponsor's approach to restoring the Agriculture Building would be determined after further structural studies and consultation with public and private preservation agencies and organizations. The sponsor would make a decision based on cost, safety and preservation merit.

C. Design Alternatives for the Ferry Building and Pier One

C-1. Ferry Building Alternative Design

Description

With this alternative, the 30-foot extensions of the north and south ends of the Ferry Building Bay side addition would not be constructed.

Environmental Considerations

This alternative would result in 2,700 fewer square feet of restaurant area on the second floor and 2,700 fewer square feet of office area on the third floor of the Ferry Building than would the proposed project.

Based on trip generation rates presented on p. 130 of this EIR, this alternative would generate 195 fewer person trips per day, a decrease of about 2%. During the peak hour, there would be 7 fewer transit trips (a 2% decrease) and 3 fewer auto trips (a 2% decrease) than with the proposed project.

If the extensions were removed, views of the Bay would be opened, particularly as seen from a distance or from an elevated location.

Reasons for Rejecting the Ferry Building Design Alternative

The project sponsor has rejected this design alternative in the belief that the extensions would be needed to visually terminate the Bay side facade; that the openings under the extensions would be 30 feet wide and 14 feet high and thus permit views of the Bay; and that the loss of rentable area would affect the financial feasibility of the project.

C-2. Design Alternative for Pier One

Description

An alternative that would provide more publicly accessible open space on Pier One was proposed by BCDC. The Total Design Plan requirement for a 15-foot walkway around the edge of this pier was based on the assumption that the existing pier shed would be retained. As the project would not retain the shed, BCDC has suggested that additional walkways and sun deck or observation areas be provided along the southern edge of Pier One.[1]

Environmental Considerations

This alternative would provide more open space on Pier One, including expanded seating and viewing areas on the sunny south side of this Pier. Such a design change would result in less office space on Pier One; the same amount of space would probably be added somewhere else on the site. This would result in no net change in environmental impacts.

Reasons for Rejecting the Pier One Design Alternative

The sponsor has rejected this alternative on the grounds that the proposed facade of Pier One has been designed to reflect the classical rhythm, scale and stepped back form of the proposed Ferry Building Bay side facade, which

in turn, is intended to repeat the architectural character of the City side facade. (Refer to pp. 21-30 of this EIR for a discussion of the project design.) Changing the line of the facade of Pier One to include more open space would affect its architectural compatibility with the other buildings, according to the sponsor. As a 3,500-square-foot plaza at the east end of Pier One and a 5,000-square-foot plaza at the western end of Pier One (opposite the bulkhead building) are proposed as part of the project in addition to public space inside the Pier One galleria, the sponsor rejects any alternative for Pier One that would further reduce rentable area.

D. No Plan Amendments

Description

This alternative would be a project that would require no changes in the Total Design Plan or amendments to the Northeastern Waterfront Plan and the Special Area Plan No. 1. The major differences between the proposed project and this alternative would be as follows:

Ferry Building: This alternative would differ from the proposed project in the amount, type and distribution of land uses. The ground floor would remain in commercial recreation uses (shops and restaurants), as with the proposed project. However, the second floor would be predominantly offices instead of predominantly retail/restaurant, as with the project and the third floor would include the World Trade Club and offices, instead of only offices, as with the project. The proposed fourth floor would be eliminated, as would the semi-circular restaurant on the BART platform. It is difficult to quantify the differences in square footage devoted to retail, restaurant and uses between this alternative and the project, as this alternative would entail a complete redesign of the project. The project sponsor would seek to compensate for the loss in rentable area by reducing or eliminating such public spaces as the galleria, atrium, pergolas, and terraces.

Agriculture Building: The 1915 portion of the Agriculture Building would be rehabilitated for 15,000 square feet of offices and a 2,000-square-foot visitors' information center, where a food hall and private restaurant totalling 47,100 square feet are now proposed. The building would include two floors with this alternative, compared with two full floors and a partial third level with the project.

A plaza would be located where the the 1918 portion of the building now stands, in accordance with the site specific policies of the Northeastern Waterfront Plan (p. 39) and the Total Design Plan (p.9), instead of a 30-foot building extension, as in the proposed project. The Amendments to the Plan for the Northeastern Waterfront (Jan. 31, 1980) specify the size of the public plaza to be about 50,000 square feet around the Agriculture Building. This could be attained by:

- Using about 17,000 square feet between the east facade of the 1915 block of the Agriculture Building and Sinbad's Restaurant (Sinbad's parking would have to be removed; the restaurant is not within the project sponsor's leasehold);

- Using about 13,000 square feet south of the Agriculture Building, at the end of The Embarcadero Promenade and including fill for the proposed tidal stairs;

- Filling in about 17,000 square feet of open water and deck between the Agriculture Building and the Ferry Building.

Pier One: The Pier One shed would not be demolished; it would be used for interim parking of 400 cars and eventually for 145,000 square feet of offices and up to 15,000 square feet of commercial/recreation where 161,000 square feet of office and 4,000 square feet of commercial recreation are proposed, with the project.

This alternative would result in less office and commercial/recreation (restaurant and retail) space than the proposed project. The Plans for Pier One assume that an additional story could be built inside the shed, accommodating

200 cars per floor as an interim use and ultimately 72,000 square feet of offices per floor. Assuming this could be done, this alternative would result in 16,000 less square feet of office space in Pier One and 15,000 more square feet of office space in the Agriculture Building than proposed, for a net reduction of 1,000 square feet of office space, compared to the project. There would be 9,000 additional square feet of commercial/recreation on Pier One and 47,100 less square feet of commercial/recreation in the Agriculture Building, for a net reduction of 38,100 square feet of commercial/recreation. Lastly, there would be a 2,000-square-foot visitor's center at the Agriculture Building. The amount and/or mix of uses in the Ferry Building also could change, but it is not possible to quantify the differences at this time.

Environmental Considerations

Based on the trip generation rates presented on page 130 of this EIR, this alternative would generate 2,115 (25%) fewer person trips per day. In the peak hour, there would be 70 (20%) fewer Muni trips and 25 (15%) fewer vehicle trips.

There would not be a substantial change in the amount of fill under this alternative for the following reasons:

(1) Pier One would have to be seismically upgraded (by buttressing piles, which could be considered new or replacement fill by BCDC) for any use (except if returned to its original warehouse/shipping use), including retention of existing parking on an interim basis. Plan policies for Pier One were developed prior to seismic investigations and therefore did not take into account the need for upgrading which would require fill to allow development on the pier.

(2) In order to provide a 50,000 square foot plaza around the Agriculture Building, about 17,000 square feet of open water would have to be decked over; this would be comparable to the 16,500 square feet of new deck area that would occur throughout the site with the proposed project.

If BCDC would not permit new or replacement piles under Pier One, the pier would not be seismically upgraded for office use. In this event, the project as a whole would have 145,000 fewer square feet of offices and 15,000 fewer feet of commercial/recreation at Pier One under this alternative.

Retention of the Pier One shed for interim parking would be consistent with the Total Design Plan and the Northeastern Waterfront Plan. Parking over the water, however, is generally discouraged by the Special Area Plan (p. 14), the Total Design Plan (pp. vi and 14), and the Northeastern Waterfront Plan (p. 17). Interim parking would impede the goal of integrating Pier One with the rest of the Ferry Building area. Likewise, retention of the shed for parking or offices would provide less incentive for public use of the accessible open space planned for the perimeter of Pier One, than would the proposed mixed development.

Reasons for Rejecting this Alternative

The project sponsor has rejected this alternative for the Ferry Building as it would result in a reduction of rentable area. The project sponsor believes that the full amount of office, retail and restaurant space proposed with the project would be necessary to offset the high and uncertain costs of rehabilitation and to make the project financially feasible.

The sponsor rejected this alternative for the Agriculture Building in the belief that the amount of space necessary to relocate the World Trade Club is best provided here and that the proposed commercial/recreation uses would encourage public use of the site. The food hall proposed for the ground floor would connect the building to public outdoor spaces, particularly The Embarcadero Promenade. The sponsor intends to provide public space in the Agriculture Building as part of a sequence of integrated public outdoor and indoor activities, and believes that offices are not conducive to that kind of use.

Regarding the open space designated in plans for the east side of the Agriculture Building, the sponsor maintains that the proposed south tidal stairs, the walkway east of the Agriculture Building and the plaza and open water north of the Agriculture Building would accomplish the intent of the waterfront plans. The proposed public galleria inside the building would supplement the outdoor open space.

The sponsor has rejected this alternative for Pier One because structural analysis indicates that a second floor could not be added inside the shed for parking or office use, as anticipated by plans for the site. The pier is seismically unsound and could not be made seismically safe for offices without the addition of buttressing piles under water. In addition, the vertical clearance within the shed is not adequate for two floors of offices. Consequently, only one floor of offices could ultimately be built. Seismic upgrading would be necessary for one floor of offices, but the financial return from about 72,000 square feet of space (one floor) would not economically justify the cost of adding the piles.

E. Additional Office and/or Retail Development

The following alternatives describe differing amounts and configurations of land uses for the project. If the project sponsor decided to change the mix of uses after a Conditional Use approval was granted, then further review by the City Planning Commission and by BCDC would be necessary.

E-1. Additional Office Development

Description

Under this alternative, up to 50,000 square feet of additional office space would be provided on the site. About 35,000 square feet would be located in the bulkhead building and up to 13,000 square feet would be distributed among the other buildings, most likely in Pier One. This would be accomplished by building the garage on an inland site (see Alternative F-1, p. 216) and by using existing space within buildings more efficiently. Thus, there would be more rentable or occupied area within the same building envelope. Efficiencies would likely be achieved by developing the Pier One galleria air space at the second and third levels. Ground level public spaces such as gallerias or the atrium in the Ferry Building would not be affected.

Environmental Considerations

Based on trip generation rates presented on page 130 of this EIR, this alternative would generate 875 additional person trips per day, a 10% increase. During the peak hour, there would be 58 more transit trips (a 17% increase) and 20 more vehicle trips (a 12% increase) than with the project.

The project sponsor is considering this alternative and would seek to implement it should the BCDC not permit use of the bulkhead building for parking; should the office market in San Francisco change; or should the financial feasibility of the project require an increase of office space. Under these conditions, the project sponsor would seek to increase office space to assure the project's financial success. See Appendix H, p. A-130, for the amendments to the Northeastern Waterfront Plan necessary to approve this alternative.

E-2. Additional Retail/Restaurant Development

Description

Three different approaches for increasing the amount of retail/restaurant space in the project are described below:

(a) The Ferry Building Complex site as a whole would be developed as one-third retail/restaurant space and two-thirds office space; with the proposed project, this distribution of land uses applies only to the Ferry Building. With 459,500 square feet of total occupied area, about 153,000 square feet would be devoted to retail/restaurant compared to 115,000 square feet of retail/restaurant with the project. This alternative would provide an additional 38,000 square feet of these uses, divided evenly between restaurant and retail. Office space would be reduced by about 38,000 square feet. This change in distribution of land uses would not affect the proposed floor plans, elevation, sections or architectural treatment of historic resources.

(b) If parking were provided off-site, about 10,500 square feet of additional retail/restaurant space could be provided on Pier One. Using the one-third/two-thirds land use distribution, total area devoted to retail/restaurant would be about 163,500 square feet, or 48,500 more than with the proposed project. There would be an equivalent reduction in office space.

(c) The 12,000 square feet of food hall space could be counted as commercial uses which could be allowed, under the Northeastern Waterfront Plan, on the plaza behind the Agriculture Building. With this alternative, the amount of allowable commercial recreation space would be 127,000 square feet, as compared to 115,000 square feet with the proposed project.

Environmental Considerations

(a) This first approach to increasing retail/restaurant space would result in an additional 1,425 person trips each day, or about 17% more than with the proposed project. Peak hour transit trips would increase 7% or 25 more trips, while peak hour vehicle trips would increase 7% or 12 more trips.

(b) With the second approach to increasing retail/restaurant space, there would be an additional 1,820 person trips per day, or about 21% more than with the proposed project. Peak hour transit trips would increase 9% or 32 more trips, while peak hour vehicle trips would increase 10% or 16 more trips.

Alternatives (a) and (b) would require amendments to the Northeastern Waterfront Plan (Appendix H. p. A-131) to allow the additional development.

(c) With the third approach, there would be an additional 450 person trips per day, representing a 5% increase; during the peak hour, there would be 8 more transit trips, a 2% increase, and 4 more vehicle trips, a 2% increase.

Reasons for Rejecting The Additional Retail/Restaurant Alternatives

The project sponsor has rejected alternatives (a) and (b) at this time. However, should the retail market in San Francisco change, or should the financial feasibility of the project require an increase of retail/restaurant space and a reapportionment of uses, the project sponsor would seek to modify the land use distribution in the project to assure financial success.

The project sponsor has not rejected alternative (c) and is discussing its acceptability with Department of City Planning staff.

F. Parking Alternatives

F-1. Off-Site Mechanical Parking Structure

Description: Under this alternative, short-term parking for about 400 cars would be provided in a mechanical, electrically-powered auto-stacking structure. The structure would be located on Port property on the west side of The Embarcadero at the Washington Street intersection, where a gas station and parking lot now operate, after removal of the gas station. The structure would be about 44 feet high, 250 feet long in the north-south direction, and 63 feet wide in the east-west direction. It would have eight levels, three below grade. Access to three car elevators would be from The Embarcadero.

If parking were provided at this location, about 600 feet from the site, the Pier One bulkhead building would be extended 20 feet to the east to accommodate an additional 35,000 square feet of office space. (With the proposed plan, the 20-foot extension would accommodate a parking garage.) Up to 15,000 square feet of additional office space could be developed elsewhere on the site, most likely in the Pier One building. (See Alternative E-1, p. 213.) If all the additional 15,000 square feet were located in Pier One, then the potential maximum development of office space there would be 211,000 square feet, as compared to 161,000 square feet with the proposed project. The amount of restaurant space, 4,000 square feet, would remain the same as with the proposed project. With this alternative, total office and commercial development on Pier One and in the bulkhead building would be 215,000 square feet, as compared to 165,000 square feet with the project.

Environmental Considerations

The Northeastern Waterfront Plan, the Total Design Plan, the Special Area Plan and the Bay Plan encourage inland parking, to keep such facilities from the water's edge and from areas of intense pedestrian activity (p. 17). The mechanical parking structure could be permitted in the RC-4 (Residential Commercial, High Density) district with Conditional Use authorization. As the inland site is an 84-E Height and Bulk district, the parking structure would be 40 feet lower than the maximum height allowable. Bulk restrictions in this district only apply above 65 feet. This alternative would move

parking away from the water's edge. A parking validation system would be implemented to discourage non-project related patronage, and parking rates in the garage would encourage short-term use.

This alternative would require excavation of fill to a depth of about 21 to 23 feet and pile driving. As three Gold Rush ships were mapped for the area one block west of this site (at Drumm and Washington), it is possible that excavation and pile driving could impact archaeological remains. Construction on fill which underlies this site could result in subsidence, especially if dewatering were required for the below-grade parking level and mechanical equipment. Pile driving noise would impact Golden Gateway residences during construction.

This alternative would remove 60 existing long-term parking spaces and add 400 short-term spaces. The 400 spaces would provide about about 57% of the amount of off-street spaces required by Section 151 of the City Planning Code.

The additional office development on Pier One alternative would result in 875 more person trips (10% more than the proposed project. Peak hour transit usage would increase by 58 trips (a 17% increase), and peak hour vehicle trips would increase by 20 trips (a 12% increase).

This alternative's impact on traffic levels around the site would not differ substantially from the proposed project's. (See Environmental Impacts, p. 140.) The additional 20 PM peak hour vehicle trips would not cause traffic conditions at the Washington/Embarcadero intersection to deteriorate below the current "B" level of service, a condition in which traffic flow is very good.

Vehicle access to the garage would be from The Embarcadero and no left turns in or out of the structure would be possible. According to the sponsor, about 20 feet of The Embarcadero right-of-way would be needed for a queuing lane, requiring realignment of the roadway. Presently, the roadway consists of three southbound traffic and one parking lane near the proposed parking site. The queuing land itself would be about 300 feet long, allowing room

for about 15 cars to line up for the garage. Under worst case assumptions that each of the 400 spaces would turn over 4.5 times a day (for a total of 1,800 vehicles per day) and that 20% of the turnovers (360) would occur during the PM peak hour, an average of about seven vehicles could attempt to enter the garage at any one time. Under peak-of-the-peak conditions, up to 15 vehicles would attempt to enter the garage at any one time. The queuing lane would be long enough to handle peak-of-the-peak conditions.

During the PM peak traffic period, up to 360 vehicles could enter and exit the garage. These vehicles could conflict with the up to 500 pedestrians who would be entering and exiting the garage. This analysis represents a worst case situation (see above) and assumes an average vehicle occupancy of 1.4 persons (360 x 1.4 = 505 persons). Most pedestrians would use the crosswalk on the north side of Washington, which is about 200 feet south of the point at which The Embarcadero curves out from under the freeway. This curve and the freeway columns obstruct sight lines for drivers and pedestrians in the area. Vehicular traffic moves at a speed of about 35 miles per hour, and would have to brake sharply in order to stop for pedestrians crossing from the garage at Washington Street. A traffic signal at this location would not be feasible due to the limited visibility and traffic speed. Unless the roadway were redesigned or traffic speed effectively lowered to 25 mph, pedestrian access to the parking structure would be safest from the crosswalks south of Washington.

The structure would be about 16 feet lower than the freeway and buildings to the west, and would not block views from upland locations as long as the freeway remains standing. However, pedestrian views of the bulkhead building would be blocked as seen from the intersection of Washington and The Embarcadero. From higher elevations or the upper floors of tall buildings, people would be able to see the flat roof of the garage. This impact could be mitigated by placing architectural elements or landscaping on the roof. See Figure 33 (p. 219) for a photomontage of the structure, illustrating views of the garage as seen from Telegraph Hill and from The Embarcadero roadway. Should The Embarcadero freeway be taken down, the garage would block views of the Bay seen from the lower floors of the Alcoa Building, Golden Gateway Commons, Justin Herman Park and Plaza, and the Hyatt Regency Hotel.

figure 33 PHOTOMONTAGE OF OFF-SITE PARKING GARAGE



source: Continental Development Corporation

The project sponsor is considering this alternative. The distance from this site to the Ferry Building would be farther than Pier One for shoppers and visitors. The project sponsor would seek to implement this alternative should BCDC not permit use of the bulkhead building for parking or should the financial feasibility of the project make necessary the addition of offices in the Pier One bulkhead, and such addition were permitted by Plans and reviewing agencies. Implementation of this alternative would involve the project sponsor's obtaining lease control of the site from the present lessee and the Port Commission.

F-2. Off-Street Loading Spaces

Description: Should the Departments of City Planning and Public Works not approve the proposed plan for providing service and delivery parking spaces (see pages 108-110 of this EIR), the required 19 spaces would need to located elsewhere on the site. Four alternative approaches to providing these spaces include:

(a) Providing all the spaces inside the Pier One bulkhead building garage, where visitor parking is currently proposed.

(b) Providing all the spaces inside the Ferry Building.

(c) Providing all the spaces on the BART platform, where the Bay Corporation restaurant has a lease to use the area for passenger and service vehicle loading.

(d) Distributing the spaces throughout the site, with 4 off-street spaces inside the Pier One bulkhead building, 10 spaces in front of the Ferry Building, 3 on-street spaces in front of the Agriculture Building, and 4 off-street spaces inside the Agriculture Building, for a total of 21 spaces. The on-street spaces in front of the Ferry and Agriculture Buildings would be available for service vehicle parking until 10:30 AM; after that time, these spaces would be available only to taxis and private vehicles for picking up and dropping off passengers. Not all the off-street spaces would have loading platforms, as some of the demand for delivery vehicle parking would be

generated by restaurants which would be served by small vans, not requiring loading platforms.[2]

Environmental Considerations

(a) Locating all the service vehicle parking spaces in the bulkhead building would eliminate all other parking there, as the mechanical stacking system could not be installed and used if ground floor space were not available. Delivered goods would need to be transported from the garage to the Ferry and Agriculture Buildings, probably by electric carts. Some pedestrian conflicts could occur with these carts, but these would be less hazardous than conflicts with larger vehicles. Deliveries and use of carts would be restricted to certain hours, such as the early morning, to mitigate this impact.

(b) Locating the service vehicle spaces inside the proposed Ferry Building galleria areas would eliminate all or portion of this area and conflict with pedestrian movement and visitor enjoyment in what is intended to be interior public open space. This impact could be mitigated by restricting deliveries to hours of low pedestrian activity, such as the early morning.

(c) Locating the service vehicle spaces on the BART platform would conflict with pedestrian movement around the area, particularly during the AM peak ferry commuter hour.

(d) Locating service vehicle spaces inside the Agriculture Building would result in about a 20-foot extension of the building to the east. To accommodate this extension, about 2,000 square feet of existing deck area would be retained and not removed, as with the proposed project. Service and delivery vehicles would enter the Agriculture Building from its north side; this circulation pattern would result in pedestrian-vehicle conflicts as people walked between the Ferry and Agriculture Buildings.

Reasons for Rejecting These Alternatives

(a) The project sponsor has rejected using the Pier One garage for service vehicle parking because there would not be enough interior clearance to accommodate both the mechanical stacking structure and trucks and other large delivery vehicles.

(b) The sponsor has rejected using Ferry Building gallerias as a parking area for service vehicles because such a use would have an undesirable aesthetic impact and would not be compatible with the recreational and commercial activities intended for this location.

(c) The sponsor has rejected using the BART platform because of the potential for pedestrian/vehicle conflicts and because such a use would not be compatible with recreational and open space activities intented for the area.

(d) The project sponsor is considering this alternative, and is working with the Department of City Planning and the BCDC to refine it and to determine if such an approach to service vehicle parking and loading would be feasible for the site.

F-3. Parking Alternatives Considered and Rejected

The following five alternatives were considered by the project sponsor and were rejected for the reasons given below. Should any of these alternatives be reconsidered as feasible and/or desirable in the future, further environmental review would be required at that time.

(a) Parking Under Pier One: This alternative would consist of a two-story, submerged parking garage for 430 cars under Pier One. It would involve construction of solid Bay fill for a non-water-related use; such fill is prohibited by the McAteer-Petris Act and would likely be considered unacceptable by BCDC. Impacts on marine life and water quality would be of the same type as the proposed project's but of greater magnitude and duration. There would be an additional 27,000 cubic yards of dredging, and construction of the garage would take nine months. Permanent on-site impacts would include changes in water circulation and sedimentation patterns near the site. Off-site impacts would result from disposal of dredge material. Impacts on marine life and water quality would require further environmental review. The sponsor considered this alternative and rejected it because of the potential environmental impacts and because of the high construction costs.

(b) Parking Under Justin Herman Park: With this alternative, the green space (Justin Herman Park) beneath the Washington-Clay freeway ramps would be used

for an underground, two-level garage for 600 cars. A green park would be replanted on top of the garage at street grade. The park would remain under control of the Recreation and Park Department, and would therefore be a public facility; anyone choosing to park there could do so. Consequently, project patrons would not be guaranteed parking, although they could benefit from reduced rates due to parking validation. The distance of the park from the site was considered by the sponsor to be inconvenient for shoppers. The project sponsor has rejected this alternative for the above reasons and for its high cost, comparable to the submerged garage under Pier One.

(c) Parking Under The Embarcadero Freeway: This alternative would involve removing the 179 monthly parking spaces under The Embarcadero freeway and along The Embarcadero and replacing them with 200 spaces for short-term use. For Ferry Building patrons, there would be a validation system for reduced parking rates. There would be a large plaza, which would cross the parking lot, connecting the site with Embarcadero Plaza. This alternative would conflict with Northeastern Waterfront Plan policy that calls for removing open, surface parking on the waterfront and The Embarcadero. It would also conflict with any future plans to remove The Embarcadero freeway and bring its traffic to street level. However, if the freeway were not removed, the alternative would improve public access to the waterfront, compared to the proposed project, as a half-acre plaza would connect the main entrance of the Ferry Building with Embarcadero Plaza. This alternative would require approval of the Port Commission, as the space under the freeway lies outside the project sponsor's leasehold. The sponsor considered this alternative and rejected it because of potential difficulties in obtaining needed approvals from other City and State agencies.

(d) Parking on Pier 26: This alternative would involve providing about 230 short-term parking spaces on Pier 26, about 2,500 feet south of the site, under the Bay Bridge. A second and partial third floor parking deck would be added inside the 54-foot high shed. Parking on Pier 26 would conflict with the Northeastern Waterfront Plan, which calls for retaining the facility for maritime use. Construction on the pier would not require new piles as would Pier One. The sponsor considered and rejected this alternative because the Port has designated this pier to remain in maritime use, and because of the

half-mile distance between the site and this pier.

(e) Off-Site Parking South of Market: Under this alternative, short-term parking south of Market Street and shuttle service to the site would be provided. One potential site for such parking would be beneath the Bay Bridge between Bryant, Harrison, Beale and Main Streets, over 3,000 feet south of the Ferry Building. This site could accommodate about 600 cars. This approach would respond to policies for the C-3-O district which call for dispersing downtown vehicle trips to feeder lots on the periphery of the central business district. The sponsor considered this alternative and rejected it because of land costs would be too high and because the potential sites would not be within walking distance of the Ferry Building Complex. A shuttle service was considered by the sponsor, but this was also rejected in the belief that people would hesitate to use such service because of waiting time for the shuttle.

G. Other Alternatives Considered and Rejected

Hotel on Pier One: This alternative would involve developing Pier One with a four-story, 300-room hotel and possibly a submerged parking structure for 300 cars. The building would be a maximum of about 57 feet high and would be contained within the existing perimeter of the pier. The hotel would be a water-related use under the McAteer-Petris Act and could be approved by BCDC. The submerged parking structure would have the same water quality and marine life impacts as would Alternative H-1. The Northeastern Waterfront Plan designates another site, Assessor's Block 3741, as a hotel site. That block is bounded by The Embarcadero freeway, Steuart, Folsom and Spear Streets, about three blocks from the Ferry Building site. The sponsor considered this alternative and rejected it because such a use could conflict with the Port Commission's plans for a hotel on Assessor's Block 3741.

Footnotes:

1. Robert Batha, Environmental Analyst, BCDC, letter, March 3, 1982. This letter is on file at the Office of Environmental Review.
2. George Williams, Assistant Director, Department of City Planning, memorandum to Allerton Blake, Continental Development Corporation, September 10, 1982.

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IX. DISTRIBUTION LIST

IX. DISTRIBUTION LIST

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X. APPENDICES

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SAN FRANCISCO DEPARTMENT OF CITY PLANNING 100 LARKIN STREET · SAN FRANCISCO, CALIFORNIA 94102

NOTICE THAT AN ENVIRONMENTAL IMPACT REPORT IS DETERMINED TO BE REQUIRED

Date of this Notice: May 29, 1981

Lead Agency: City and County of San Francisco, Department of City Planning
100 Larkin Street, San Francisco, CA. 94102

Agency Contact Person: Carol Roos Tel: (415) 552-1134

Project Title: EE 81.63
Ferry Building Complex

Project Sponsor:
Continental Development Corporation
Project Contact Person: Gloria Root
Planning, Analysis & Development

Project Address: The Embarcadero, Ferry Building/World Trade Center, The Agriculture Building, and Pier 1 and part of The Embarcadero.

Assessor's Block(s) and Lot(s): 9900 F,A, P-1

City and County: San Francisco

Project Description: The project would renovate the Ferry Building and Agriculture Building, (two buildings on the National Register of Historic Places), and the bulkhead building of Pier 1. The existing Pier 1 shed would be replaced with new construction. The project would include about 270,000 square feet of office, 140,000 square feet of retail, 143,000 square feet of public space and 4,000 square feet of museum display space for a total of about 575,000 square feet where 425,000 now exist. The project would include parking for about 450 cars under Pier 1. The project would require amendments to the Total Design Plan of the San Francisco Comprehensive Plan.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15081 (Determining Significant Effect), 15082 (Mandoatory Findings of Significance) and 15084 (Decision to Prepare an EIR), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

Deadine for Filing of an Appeal of this Determination to the City Planning Commission:
June 8, 1981

An appeal requires 1) a letter specifying the grounds for the appeal, and 2) a $25.00 filing fee.

Alec S. Bash, Environmental Review Officer

THE FERRY BUILDING COMPLEX

The Ferry Building,
Agriculture Building,
World Trade Center, Pier 1
and part of The Embarcadero

EE 81.63

May 29, 1981

ENVIRONMENTAL EVALUATION CHECKLIST
(INITIAL STUDY)

(415) 558-4656 100 Larkin Street San Francisco, CA 94102

I. PROJECT DESCRIPTION

The Ferry Building Complex site includes the Ferry Building, the Agriculture Building, Pier 1, a portion of the BART platform directly east of the Ferry Building and areas between these structures. These buildings are shown in Figure 1 (p.2). The project excludes the Golden Gate Ferry terminal, the Bay Corporation restaurant and the BART ventilation structure. Although these are within site boundaries, they are not part of the project sponsor's leasehold. The site includes submerged lands out to approximately 1,000 feet east of the end of Pier 1 between Pier 1 1/2 and Pier 1 on the north and continuing on to a line half way between Pier 3 and Pier 1. The southern site boundary falls 150 feet south of the Agriculture Building. The project would involve renovation of existing buildings, some demolition and new construction on Pier 1, development of public open space and removal of about one acre of platform fill.[1]

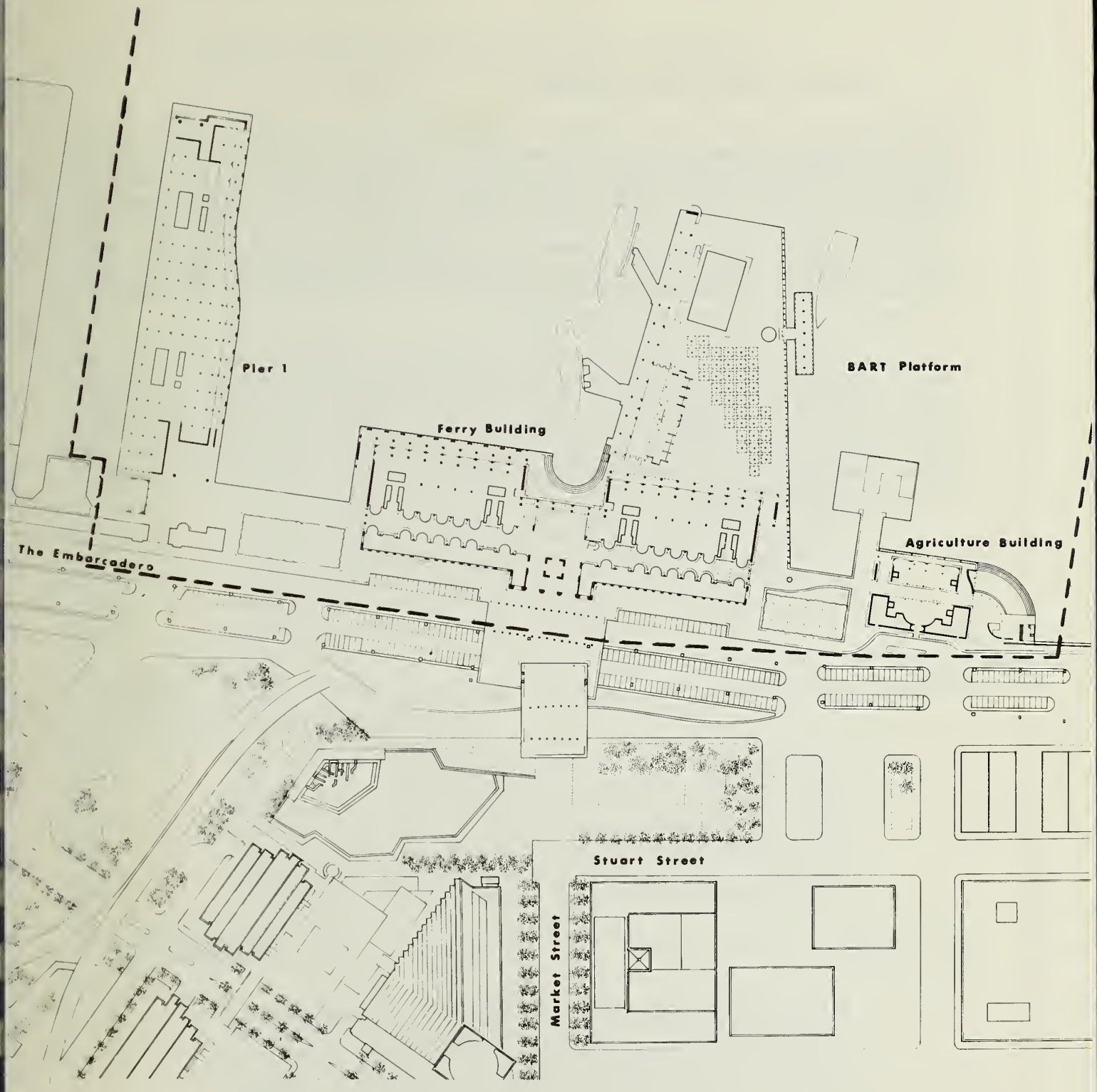
The Ferry Building is a City landmark, as well as a National landmark listed on the National Register of Historic Places, and would be restored according to the Charles Hall Page Guidelines.[2] This building contains about 300,000 gross square feet (sq. ft.) on three floors. The rehabilitated Ferry Building would have about 340,000 sq. ft. on four floors: 115,000 sq. ft. of office, 110,000 sq. ft. of retail, 4,000 sq. ft. of museum facilities and 111,000 sq. ft. of public space. The Ports' agreement with Continental Development Corporation, the project sponsor, calls for one-third retail and two-thirds office in the Ferry Building, except that space occupied by long term tenants may be subtracted from office space and added to retail use. The agreement did not contemplate cultural facilities as part of the project. Most of the interior of the building would be gutted and the bayside facade would be demolished, rebuilt and extended about 20 feet eastward.

The Agriculture Building is listed on the National Register, but it is not a City landmark. This building is structurally unsound, as the west side has sunk about a foot and a half lower than the east side. A 1918 addition to the bayside of this building has a sagging roof and differential foundation settlement. The entire 1918 section would be demolished and replaced with new construction. The sponsor would attempt to save the 1915 facades; the interior would be completely replaced. The Agriculture Building presently contains about 33,500 sq. ft. in the 1915 portion and 3,500 sq. ft. in the 1918 portion for a total of 37,000 sq. ft. on two floors and a mezzanine. After rehabilitation and additions, there would be a total of 46,000 sq. ft. including 14,000 sq. ft. of retail, 27,000 sq. ft. of office and 5,000 sq. ft. of public space.

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1 Platform fill refers to pile-supported decks over Bay waters. The project would remove 1.25 acres of fill.

2 These guildelines for renovation of the Ferry Building are contained in Union Depot and Ferry House by Charles Hall Page and Associates Inc. These guidelines were prepared for the Port Commission and have been incorporated in the Development and Disposition Agreement (DDA) executed between the Port of San Francisco and Continental Development Corporation.



Project Location

FIGURE 1

DASHED LINE INDICATES SITE

I. PROJECT DESCRIPTION, continued

Pier 1 consists of a bulkhead building along The Embarcadero and a finger pier with a shed that encloses an area of about 90,000 sq. ft. The pier shed presently contains a small amount of office space and long-term parking for up to 200 cars, and the bulkhead building contains a restaurant. The bulkhead building would be restored, and the 40-foot-tall shed would be replaced with a three-story building containing 190,000 sq. ft. The sponsor proposes to develop a maritime-related World Trade center with 126,000 sq. ft. of offices, 15,000 sq. ft. of retail, 22,000 sq. ft. for the World Trade Club and 27,000 sq. ft. of public space for access to the waterfront.

The project would include pedestrian walkways from the Waterfront Promenade (Pier 24 to the Agriculture Building) around and through the Agriculture Building, the BART platform, the Ferry Bulding and Pier 1. In addition, the walkway would pierce Pier 1 east of the bulkhead to provide direct connection to Pier 3. About one acre of dilapidated platform fill would be removed from the Bay. The BART platform would be landscaped and an open-air produce market would be established there. This market would not involve permanent structures.

II. POTENTIAL SIGNIFICANT ENVIRONMENTAL EFFECTS

Potential environmental issues include the effect of the project on transportation (traffic, parking and circulation), employment and housing, Comprehensive Plan policies and objectives, cultural resources, sedimentation, subsidence and marine life. These issues require further analysis in a focused EIR, with attention to project construction, operation and cumulative impacts.

Would the construction or operation of the project result in a change in the use of existing transportation systems? (transit, roadways, pedestrian ways, etc.) (4a)

> The project would result in a net addition of about 150,000 sq. ft. of office, retail, restaurant and cultural facilities. There would be an increase of employee and visitor trips to the site by transit, private vehicle and delivery truck. As the project would increase retail use and public areas, there would be an increase in pedestrian traffic as well. Although the site is accessible by MUNI, BART, ferry service and regional bus lines, increases in the numbers of employees and visitors to the site could impact the peak hour capacity of public transit. Transportation impacts of the project will be further studied in the focused EIR with attention to the effect of the project on Golden Gate Bridge District ferries and the facilities at the San Francisco Ferry terminal and Pier 1. The effect of the project on the planned MUNI E-line will also be studied further in the EIR.

Would the project result in an increase in traffic which is substantial in relation to existing loads and street capacity? (4b)

> The project would cause an increase in automobile trips to the site, which could affect local service levels on The Embarcadero, The Embarcadero Freeway and other streets near the site. If the Embarcadero Freeway were to be removed as has been proposed, the project's impact on surface streets could be greater than if the freeway were to remain. These impacts will be further studied in the focused EIR.

Would the project result in effects on existing parking facilities, or demand for new parking? (4c)

> The project would remove 500-800 long-term parking spaces under The Embarcadero Freeway and in the leasehold area of the Ferry Building Complex. Approximately 450 new, short-term spaces would be provided in a garage under Pier 1. The sponsor would provide access for valet parking for the Bay Corp. and Sinbad's restaurants. The impact of reducing parking in the site area, while increasing the intensity of land use, will be studied further in the EIR, with particular attention to impacts on public transit. If The Embarcadero Freeway were to be removed, all parking beneath it would be removed as well. The effect of this reduction in surface parking will be studied further in the EIR.

Would the project result in alteration to current patterns of circulation or movement of people and/or goods? (4d)

The project would change the amount and frequency of goods movement in the site area, and could require changes in vehicular access for deliveries to facilities and existing operations. This impact cannot be assessed until more detailed design alternatives are developed by the project architects and the transportation consultant. These impacts will be addressed in the EIR.

Would the project have a growth-inducing effect? (3b)

The project would result in new jobs on site and, through the multiplier effect, could foster still more jobs. More jobs result in more expenditures which, in turn, result in more economic growth. As the Ferry Building Complex is intended to be a regional and national destination point, it would contribute to the growth of business and tourism in San Francisco. The potential impact for growth due to this and other projects, requires further study in the EIR.

Would the proposed project require relocation of housing or business, with a displacement of people, in order to clear the site? (3c)

The project would result in the relocation of most tenants of the Ferry Building, all tenants of the Agriculture Building and all office and parking tenants on Pier 1. Existing tenants that are international and world trade oriented would be encouraged by the sponsor to relocate in the project. Whether businesses would be lost to the City as a result of the project, relocate elsewhere in the area or return to the Ferry Building Complex needs further study, as do the economic implications of the loss, should an out-migration be expected to occur.

Would the proposed project create or eliminate jobs during construction, operation and maintenance of the project? (4d)

The project would both create and eliminate jobs in that some existing businesses might leave the City, on one hand, and new employment during construction and occupancy would be generated, on the other. The net effect would be greater employment than currently exists on the site, but the magnitude and implications of this increase require further study.

Would the project create an additional demand for housing? (3c)

An increase in the number of permanent jobs and a change in the pay scale of employees at the project site could affect the

demand for housing. In general, more permanent jobs imply an increase in the number of people who would seek housing in the City. However, these jobs must pay sufficiently to enable their holders to afford San Francisco housing. Typically, retail workers are paid less than office workers, so this group may not satisfy their demand in the City. The market power for different types of new jobholders requires further study to assess the impact of more jobs on the demand for housing in San Francisco,

Would the project conform to objectives and policies in the Comprehensive Plan (Master Plan) of the City? (A1)

The project would require amendments to the Total Design Plan of the Comprehensive Plan, for removal of the shed and increase in the amount of office space on Pier 1, and for retail use at the Agriculture Building. The impact of Plan changes requires further environmental assessment in the EIR. The project would comply with objectives and policies of the Northern Waterfront Element of the Comprehensive Plan, in that it would result in improved public access to the waterfront, contribute to the proposed pedestrian system, improve shoreline appearance and add maritime-related offices in the World Trade Center proposed for Pier 1.

Would the project require a variance, or other special authorization under the City Planning Code? (A2)

The project would require a conditional use authorization for non-maritime uses according to Section 240.1 (a,b) of the Planning Code. As the site is in the Northern Waterfront Special Use District No. 1, it would be subject to Discretionary Review by the Planning Commission. The Commission could waive parking requirements for the site according to Section 240.1 (c) of the Planning Code as part of the conditional use process. All of the above approvals would be determined by the City Planning Commission.

Would the project require approvals or permits from City Departments other than DCP or BBI, or from Regional, State or Federal Agencies? (A3)

The project would require approvals from the following agencies:

- The San Francisco Port Commission

- The San Francisco Bay Conservation and Development Commission (BCDC)[1]
- The San Francisco Landmarks Preservation Advisory Board
- The San Francisco Art Commission
- U.S. Army Corps of Engineers

The McAteer-Petris Act and the San Francisco Bay Plan of BCDC, restrict the types and uses of fill in the Bay. The proposed submerged parking structure under Pier I would be solid fill and could not be approved to serve a non-water-related use such as offices. The submerged parking could be approved if a hotel were proposed for Pier 1, as that would be considered a water-related use according to BCDC's enabling legislation. A hotel is not allowed by the Total Design Plan. The sponsor proposes to build a maritime-related World Trade Center on the pier. The project's relation to BCDC and City policies require further study in the EIR.

The McAteer-Petris Act requires projects to provide the maximum feasible public access to the waterfront. This factor will be an important element in BCDC's evaluation of the project, and will be addressed in detail in the EIR.

The Port has the authority to issue its own building permit for the project. Additional approvals may be required from the following agencies:

- The State Department of Fish and Game
- The State Historic Preservation Office and the U.S. Department of the Interior
- The San Francisco Recreation and Park Commission. (See Alternatives, p 19)

If parking is provided at an upland site under Justin Herman Park, approval would be required from

- CalTrans
- The San Francisco Redevelopment Agency

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[1] There are two circumstances under which the Executive Director of BCDC could issue an administrative permit for the project rather than a major permit:

1) Routine repairs, reconstruction, replacement and maintenance of pilings.
2) Placing piers to support extensions of portions of principal structures over the water where the total of such extensions would not exceed 1000 square feet in area.

Would the proposed project include or affect a known historic site, structure or building? (13a)

The project would include rehabilitation and new construction of two landmark buildings. Ferry Building rehabilitation standards are suggested in the Charles Hall Page Guidelines, which recommend architectural elements to be kept, restored or eliminated. There are no detailed restoration guidelines for the Agriculture Building. The exterior of the Pier 1 bulkhead building would be restored and the interior modernized. The architectural treatment of the entire site requires the approval of the Art Commission and the Landmarks Preservation Advisory Board. Further documentation of project impacts on historic buildings will be provided in the EIR.

Would the proposed project include or affect a known archeological resource or an area of archeological resource potential? (13b)

The site was part of Yerba Buena Cove, a small bay which provided anchorage for pre-Gold Rush ships. The Gold Rush era produced areas of landfill with wharves extending from the shallow waters out to deeper anchorage in the Bay. As the entire site was underwater prior to 1849, there could be ship remains at the site. Potential impacts on any remains would result from dredging for the Pier 1 underwater garage, and from limited pile driving and drilling for the east side of the Ferry and Agriculture buildings. The potential for discovery of artifacts requires further study in the EIR.

Would the proposed project cause a change affecting unique ethnic or cultural values? (13c)

The Ferry Building and Agriculture Building are historic structures that uniquely represent San Francisco's past when ferry boat travel was the only transportation to destinations across the Bay. As these buildings have been altered over the years, only some of the original architectural features remain; even the western facades have been changed. The project architects propose to retain or reconstruct some of the main elements of these buildings, but no attempt will be made to reconstruct those features that have been substantially lost or extensively altered. For example, the west facade of the Ferry Building and the central skylight would be restored and reconstructed respectively. The grand staircase, which was partially removed years ago, will not be reconstructed. Thus, the effect of the proposed design on the building will be studied further in the EIR.

Would the proposed project result in substantial spoils during site preparation, grading, dredging or fill: (9c)

The underwater garage would generate debris due to cutting concrete-jacketed wooden piles below Pier 1. Dredging and dewatering would be required, generating more spoils. The garage would be solid fill and could affect sedimentation and water flow patterns near the site. If upland parking were provided on the Recreation and Park Department site, excavation and dewatering would be required which, in turn, could cause subsidence. The impacts and possible mitigation of these parking schemes require further study.

Would there be a reduction in plant and/or animal habitat or interference with the movement of a migrating fish or wildlife species? (8a)

There could be an impact on benthic life due to the proposed underwater garage; this will be researched with other marine issues directly related to impacts on bottom life, such as sedimentation and dewatering. Bay waters near the Ferry Building and Pier 1 are stagnant and do not support large specimen marine life according to a study of the area on file with BCDC.[2] There are no rare or endangered species on or near the site, nor are there any trees. Dredging could have an impact on benthic and bottom life, aquatic wildlife and sedimentation patterns associated with solid fill for an underwater parking garage, and will be studied further in the focused EIR.

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2 "Ferry Port Plaza Sedimentation Study, Ferry Port Plaza," Dr. Ray B. Krone, Consultant on Estuarial Sediment Transportation, May 6, 1970.

III. INSIGNIFICANT ENVIRONMENTAL EFFECTS

Would the proposed project be different from surrounding land uses: (B1a)

> The project would be similar to existing land uses at the site, which include offices, restaurants, retail and parking. The increases in land use intensity would be similar to that of adjacent land uses such as Embarcadero Center, the Hyatt Regency Hotel and One Market Plaza. The project, as a whole, would increase public access to the waterfront and provide the type of uses called for in the Total Design Plan and the Northern Waterfront Plan. The land use impacts of the project would be insignificant and require no further study.

Would the proposed project disrupt or divide the physical arrangement of an established community? (B1b)

> Aside from rehabilitation and upgrading of existing structures, the project would result in removal of dilapidated platform fill and could not have an impact on the physical arrangement of an established community. No further study is necessary.

Would the proposed project obstruct or degrade any scenic view or vista open to the public? (B2a) Reduce or obstruct views from adjacent or nearby buildings? (B2b) Create a negative aesthetic effect? (B2c)

> The project would maintain existing view corridors from The Embarcadero and Market Street to the waterfront. All proposed building reconstruction would be within existing envelopes and building footprints for the most part. The design and rehabilitation would be expected improve the appearance of the area.

Would the project generate light and glare affecting other properties? (B2d)

> Use of Pier 1 for offices could result in lights affecting upland areas at night. Pier 1 would not generate glare as its building mass is, and would remain, on a north-south axis with short ends exposed to the rising and setting sun. The tendency for glare impacts from the Ferry and Agriculture Buildings would be reduced by open water to the east and The Embarcadero Freeway to the west. As there would be no change in the reflectivity of glass on the Ferry Building and Pier 1, no further study of glare is required. The visual quality and architectural use of glass will be discussed in the EIR.

Would the proposed project result in generation of noise levels in excess of those currently existing in the area? (5a)

> The thoroughfare noise level near The Embarcadero Freeway is 75-80 L_{dn}, as mapped in the Environmental Protection Element of the Comprehensive Plan. This places the project in a land use compatibility category for which new development should

be discouraged unless a detailed analysis of noise reduction requirements is made and needed noise insulation features are included in the design. The project itself would have no detectable impact on existing ambient noise levels as the noise generated by traffic on the freeway would be greater than any increases in traffic noise on The Embarcadero roadways that would occur due to the project.

Would existing noise levels impact the proposed use? Are Title 25 Noise Insulation Standards applicable? (5b, 6b)

The project would be exposed to freeway noise, as the existing buildings now are. Noise is most intense on the west side of the Ferry Building. There are no mandatory noise reduction requirements for commercial buildings.

There are no sensitive receptors, such as children and elderly, near the site and most existing tenants would be relocated prior to demolition and construction. The acoustical disturbance due to construction would impact workers on Pier 1 1/2 and Sinbad's restuarant. The offices and hotel west of the site would not experience disruptive noise levels during construction because they are several hundred feet away from the water where most construction would occur. In addition to distance, construction noise effects would be reduced by the mass of the Ferry Building, the Agriculture Building, the Pier 1 bulkhead building, the freeway structure and existing traffic noise. There would be limited pile driving for the project as drilling techniques would be used to protect the historic structures. The sponsor agrees to mitigate potential noise impacts by means listed at the end of this document. No further study of noise impacts is necessary.

Would the project result in violation of any ambient air quality standard or contribution to an existing air quality violation? (6a)

San Francisco enjoys some of the clearest air in the Bay Area. From 1976-1980, the City exceeded the federal ozone standard (.12 parts per million) only once, in 1976. During 1977, 1978, 1979, and 1980 San Francisco did not exceed the one-day federal standard for ozone. Nitrogen dioxide, a contributor to the formation of ozone, exceeded the State of California standard on four days in 1979, but not at all in 1980.

The net increase in traffic due to the project would not have a significant impact on local air quality and would not increase the frequency of standards violations in San Francisco. In order to have a measurable impact on air quality, vehicular traffic would have to add at least 10% to the existing traffic volumes near the site.

As The Embarcadero Freeway carries about 70,000[1] cars daily (average daily trips or ADT), the project would have to increase local traffic by 7,000 trips before the threshold of impact measurement were reached. The Ferry Building Complex would add about 1000 vehicle trips in the peak hour, which is less than 10% of the volume on adjacent roadways, particularly the freeway. The project could measurably worsen air quality on The Embarcadero roadway, as that street carries about 10,000 ADT.[2] There could be a cumulative impact from this and other projects. Project and cumulative effects will be discussed in the EIR.

The project would decrease the amount of pollutants due to space and water heating as obsolete equipment would be replaced by more efficient mechanical systems.

During demolition and construction, there would be an increase in particulate matter near the site. The sponsor agrees to mitigate this impact. No further study is required.

Would the proposed project result in alteration of wind, moisture, or temperature (including sun/shading effects) or any change in climate, either locally or regionally? (6e)

As the project would consist of rehabilitation of existing structures and new construction within existing envelopes, the project would have no impact on wind, moisture, temperature or sun/shade, or on the local or regional climate. No further study is required.

Would the proposed project have an effect upon or result in a need for new or altered government services in any of the following? (7a)

Fire Protection: The project would have no impact on the delivery of fire protection services as it would provide a better and more modern life safety program than currently exists at the site.[3] Fire Department access to existing buildings on and around the site would be maintained, including Sinbad's restaurant and the restaurant on the BART platform. Although

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1 (CalTrans) State of California, Department of Transportation, traffic counts for the Embarcadero Freeway for 1980.

2 Traffic Engineering, Department of Public Works, traffic counts for The Embarcadero roadway for 1980.

3 Chief Joseph Sullivan, San Francisco Fire Department, telephone conversation April 13, 1981. The 3-minute response time of the Fire Department would not be affected by the project.

cumulative fire impacts in densely developed areas with high-rise buildings are of increasing concern, the project would involve low rise construction that would be accessible to land and water-based fire equipment. The sponsor agrees to mitigate fire hazards by developing a complete life safety program in consultation with the San Francisco Fire Department. Included would be sprinklers, safer heating equipment and fire-resistant building materials. The 8-inch water mains that were installed in 1980 near the north and south side of the Ferry Building would be adequate to enable the Fire Department to respond to a fire on the site.

Police: The project would have no impact on the ability of the City to provide police protection services to the site as the project would have its own security force and protection program, including electronic monitoring devices.[4]

Schools: The project would have no adverse impact on the school system and could result in increased tax revenues for the Unified School District. No further study is required.[5]

Parks and other recreational facilities: The project could result in greater use of Justin Herman Plaza, which could increase the need for maintenance and litter collection. This would not adversely affect the park nor materially impact the Park and Recreation Department's ability to maintain it.[6] One alternative parking plan would involve a park site north of The Embarcadero Four building about two blocks west of the site. As this proposal would call for a green park at grade, (above an underground garage), park and recreation facilities would be temporarily impacted during construction, but would be restored in the long term, at no cost to public agencies. This alternative could cause subsidence of Justin Herman Plaza and will be studied further in the EIR along with other geotechnical impacts.

Maintenance of public facilities: The sponsor would maintain all public facilities on the site, including plazas, promenades, galleria and public access areas north and south of the Ferry

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4 Sergeant Paul Liebert, Planning and Research Division, San Francisco Police Department, telephone conversation, April 3, 1981.

5 Larry Jacobson, San Francisco Unified School District, telephone converstion May 15, 1981.

6 Tim Lilliquist, Department of Park and Recreation, telephone conversation, May 13, 1981.

Building, on most of the BART platform and on the walkways around Pier 1 and the Agriculture Building.

Power and natural gas: The project would have no impact on the ability of PG & E to supply power and natural gas for the site.[7] While Pier 1 would consume more energy than it presently does, the project would probably consume less energy overall than the existing buildings, as passive solar features for heating and cooling would be included in the renovation plans. No further study is necessary, as the project's impact on energy consumption would be insignificant. Compliance with title 24 of the California Administrative Code regarding energy conservation will be noted in the EIR.

Communication Systems: The project may require relocation of a Pacific Telegraph & Telegraph (PT & T) cable located under Pier 1, and a monitoring device at the southeast end of the pier, but would have no affect on the ability of PT & T to deliver communication services in the long run. PT & T would have no problem supplying service to the project.[8] No further study is required.

Water: The project would result in greater water consumption at the site, primarily due to the proposed use of Pier 1 and additional restaurants throughout the project. Eight-inch water mains near the Ferry Building could handle all normal domestic use and fire needs.[9] The impact on the City's water supply and delivery system would be insignificant, and requires no further study.

Sewer/storm water drainage: The project would not significantly impact the City's sewer system as no more runoff would result from the proposed rehabilitation. During construction, some dust and debris could wash into the sewer system. The increase in wastewater would be insignificant and requires no further study.[10]

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7 Robert Fohler, Power Engineer, San Francisco Division, Pacific Gas and Electric, telephone conversation May 14, 1981.

8 Charles B. Colgate, Assistant Manager for Engineering, Pacific Telegraph & Telephone, telephone conversation May 14, 1981.

9 Gene Cooney, Civil Engineer, San Francisco Water Department and Chief Joseph Sullivan, San Francisco Fire Department, telephone conversation May 13, 1981.

10 Robert Swanstrum, Clean Water Program, telephone conversation May 15, 1981.

Solid waste collection and disposal: The project would generate demolition debris and dredge materials during construction, which would be hauled from the site and disposed of at an as-yet unidentified location. During occupancy, the project would generate more solid waste than under existing conditions, but a garbage handling system, including trash compactors, would serve tenants. Trash would be hauled from the site by a scavenger service with costs borne by the tenants. The net addition in solid waste due to the project would be insignificant and requires no further study.[11]

Would the proposed project result or be subject to potentially hazardous geologic or soils conditions on or immediately adjoining the site? (slides, subsidence, erosion and liquefaction) (9a)

The site is in a Special Geologic Study Area in which there are ground failure and subsidence hazards. Potential subsidence hazards from the project could affect Justin Herman Plaza and The Embarcadero Freeway footings, and require study and mitigation measures in the EIR. While all of the buildings on the site have survived earthquakes, Pier 1 and the Agriculture Building would have to be seismically upgraded. If the underwater garage were built, it would be designed to seismic standards. If it is not built, Pier 1 would require additional batter piles and deck stiffening to be seismically safe for any use, including parking. New construction on Pier 1 would have to comply with the seismic standards of the Building Code and requires, no further study in the EIR.

Would the project result in reduction in the quality of surface water? (10a) Change run off or alteration to drainage patterns? (10b)

The project would improve the quality of Bay water in the area, as water presently runs off building roofs in an uncontrolled pattern and enters the Bay. Gutters and downspouts would be installed as part of renovation, channelling water to sewers rather than into the Bay. In addition, runoff that now pools around the Ferry Building would be directed to sewers rather than left standing in pedestrians walkways. This would be accomplished by resurfacing plazas and walkways, which would improve pedestrian safety. There would be no increase in impermeable surface area with the project and new landscaping would increase soil absorption of runoff.

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11 Mr. Garbarino, Office Manager, Golden Gate Disposal Service, May 18, 1981.

Open water pipes under the Ferry Building now drain directly into the Bay. These would be closed off and the water would be channelled to the sewer system for treatment prior to discharge. The project could have temporary construction impacts, as dredging would be required for the Ferry Building extension, the tidal stairs near the Promenade, and Pier 1. Water used in concrete cutting or to wet down dust could drain into the Bay. No further study of project occupancy impacts on water quality is required as the project would reduce existing impacts on local water quality.

Would the project result in a change in the quality of the public water supply or in the quality or quantity (dewatering) of groundwater? (10d)

The project would have no impact on the quality of the public water supply. Potential dewatering and subsidence impacts would be assessed as stated above.

Would the proposed project result in any change in consumption of energy? (11a)

The project would result in greater energy consumption on Pier 1, but the project would consume less energy overall than is currently the case. This is because passive solar features for heating and cooling would be included in renovation plans, and because more modern and efficient mechanical systems would replace obsolete equipment. The project must comply with Title 24 of the California Administrative Code regarding energy consumption and heat loss reduction. Existing buildings are not rquired to comply. The project would not result in a substantial increase in the demand on existing energy sources. No further study is required.

Would the project affect the potential use, extraction, conservation or depletion of a natural resource? (11c)

The project would change the use of the Bay by increasing public access to the waterfront. Promenades, plazas, sitting and picnic areas would be available to the public. As sedimentation under Pier 1 has resulted in natural fill, the proposed underwater garage, though solid, would not change the use of surface or underwater areas for activities such as fishing.

Would the proposed project result in an increased risk of explosion or release of hazardous substances, in the event of an accident, or cause other dangers to public health and safety? (12a)

There would be no increase in health hazards due to the project as there would not be a change of land use which might introduce such a concern. No further research is required, as the project's impact would be insignificant.

IV. MITIGATION MEASURES

Mitigation measures for potentially significant impacts will be further developed after research on the effect of the project on transportation and circulation; employment and housing; Comprehensive Plan policies and objectives; cultural resources; sedimentation, subsidence and marine life. Mitigation measures will be presented in the focused EIR.

(1) To mitigate noise impacts, the sponsor would follow the recommendations of an acoustical expert to develop means of reducing interior project noise levels caused by the Embarcadero Freeway. During construction the sponsor must comply with the City Noise Ordinance (Article 29, Section 2907b, Regulation of Noise) which limits noise emissions from any powered construction equipment to 80 dBA at a distance of 100 feet. In addition, the sponsor agrees to additional construction noise mitigations, as needed, which might include but would not be limited to the following:

- o Limiting hours of most equipment operation to the normal working hours of 7:30 AM to 4 PM. (On occasion, work may continue after 4 PM but obnoxious work would not extend past 8 PM;
- o Limiting construction equipment to the minimum required for a particular phase or task;
- o Use of state-of-the-art mufflers, silencers, and noise control features for all equipment;
- o Use of quieter procedures and machines when possible; and
- o Eliminating unnecessary warm-up, idling, and engine revving.

(2) During demolition, there would be an increase in airborne dust and particulate matter. To mitigate the potential impacts, the sponsor would require the contractor to water down concrete dust and other debris. In addition, the sponsor is considering a phased demolition and reconstruction program that would increase the period over which dust would be generated, but would lessen its intensity at any one time.

(3) To mitigate potential seismic and geotechnical impacts the sponsor would follow the recommendations of a California-licensed soils engineer regarding all phases of site preparation, shoring and foundation and pile design and construction.

(4) Potential water quality impacts due to construction activities such as concrete cutting and dust wet down would be mitigated by requiring the construction contractor to channel water away from the Bay and to the sewer system.

(5) The project would include a passive solar heating and cooling system to mitigate energy impacts. The project must comply with Title 24 of the California Administrative Code regarding energy consumption and heat loss reduction.

(6) To mitigate the potential impact of flourescent bands of light at night, the sponsor would require most fixtures to be turned off after 11 PM.

(7) Renovation of the Ferry Building, the Agriculture Building, the Pier 1 bulkhead and removal and replacement of platform fill would halt deterioration of public property on the Northern Waterfront.

(8) Removal of crumbling platform fill north of the Ferry Building would reduce hazards to pedestrian safety.

(9) Seismic upgrading of Pier 1 and other project structures would reduce earthquake hazards.

(10) Landscape materials would increase the amount of permeable ground cover on the site, mitigating potential runoff impacts.

(11) New construction would allow better control of roof gutter runoff and would prevent direct entry to the Bay.

(12) Open water pipes under the Ferry Building presently drain directly into the Bay; this impact on water quality would be eliminated due to new plumbing for the entire project.

(13) All demolition debris would be contained, collected and hauled from the site, and be disposed of in an environmentally acceptable manner at an as-yet undetermined location.

(14) Pedestrian walkways, waterfront plazas, the galleria and tidal stairs would all be interconnected with the Promenade now under construction south of the Agriculture Building, and would encourage public use of the site for passive recreation, shopping, dining and cultural purposes.

(15) Views of the waterfront would be improved by removal of up to 500 surface parking spaces under and around the Embarcadero Freeway, by returning more than an acre of surface fill to open water, and by providing landscaped open space and other public amenities.

(16) The view of the waterfront from Market Street would be improved by making the Bay visible through the Ferry Building. Back-lighting introduced to the Ferry Building via skylights would make the proposed atrium transparent as seen from the outside of the building.

(17) Should evidence of archeological remains be found during dredging, construction would be stopped, the Office of Environmental Review and the Landmarks Preservation Advisory Board would be notified and the sponsor would select a professional archeologist to assist OER in evaluating the significance of the find as well as the appropriate procedures for dealing with it. Construction would be suspended up to a maximum of three weeks to examine, evaluate and retrieve the artifact(s) should that be an appropriate course of action.

(18) The sponsor agrees to provide for on-site sale of BART tickets and other transit passes, and will encourage employer tenants to subsidize tickets.

(19) The sponsor would support efforts to implement flex-time and variable work hours for employees, to mitigate transit impacts.

ALTERNATIVES TO THE PROPOSED PROJECT

Alternatives to the project include use of Pier 1 for a 300-400 room business-oriented hotel. This would be a water-related use under the terms of the McAteer-Petris Act, the enabling legislation for BCDC. This hotel would also have a submerged garage, as under the proposed plan. This alternative will be discussed in the EIR, as will a hotel with parking at an upland location.

The second alternative would be to provide parking at an inland location that could accommodate 500-800 cars rather than submerged parking under Pier 1, with the same land uses as those proposed under the preferred alternative. One potential site is the City Recreation and Park Department land north of the Embarcadero Center Four building and adjacent to the Clay and Washington Street freeway ramps. If this site is used, parking would be below grade and a green park would be planted on top. As this site would require dewatering for construction and has potential subsidence hazards, it could have environmental impacts similar to those associated with dredging for the underwater garage. This alternative will be discussed in the EIR.

The third alternative would be another parking solution which would provide short-term parking for 325 cars where long-term parking now exists, under The Embarcadero Freeway. This would be in addition to the proposed underwater garage. Parking would be provided on an interim basis until such time as the freeway is removed (as recommended by the Board of Supervisor, the City Planning Commission and the Metropolitan Transportation Commission) or an upland site for parking becomes available.

A fourth alternative would inlcude an office building on Pier 1 with submerged parking and an office building with parking at an inland location. This would be similar to the proposed world trade center except that there would be little or no retail goods display space or restaurants. Consequently, there would be more area devoted solely to office use.

The EIR analysis will address the environmental and economic aspects of each alternative, as well as impacts on the Bay. Public access under each will be discussed in the EIR.

V. MANDATORY FIND OF SIGNIFICANCE

		Yes	No	D
*1	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?		X	X
*2	Does the project have the potential to achieve short-term, to the disadvantage of long term, environmental goals?	X		X
	If removing parking from the waterfront is considered a short-term environmental goal to improve the appearance and accessibility of the Bay, the provision of underwater parking on Pier 1, which is consistent with the goal, would be at the expense of a long-term environmental goal which calls for no more solid fill in the Bay. Long-term environmental goals served by the proposed project would include an improvement in local water quality and removal of obsolete piers and existing fill which would return 50,000 sq. ft. of water surface area to the Bay. (E2)			
*3	Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and possible future projects.)	X		X
	The project would have environmental effects which are individually limited but cumulatively considerable, in view of prior and future development in the area. For example, transit, parking, air quality, housing and employment impacts have and continue to affect the downtown and City as a whole. (E3)			
*4	Would the project cause substantial adverse effects on human beings, either directly or indirectly?		X	
5.	Is there serious public controversy concerning the possible environmental effect of the project?		X	

ENVIRONMENTAL EVALUATION CHECKLIST
(Initial Study)

Project File No: EE 81.63 Title: Ferry Building Complex

Address: Ferry Building/World Trade Center Assessor's Block and Lot: 9900 F,A, P-1
Pier 1, the Agriculture Building and part of The Embarcadero.

A. GENERAL CONSIDERATIONS:	Yes	Maybe	No	N/A	Disc.**
1. Would the project conflict with objectives and policies in the Comprehensive Plan (Master Plan) of the City?		x			x
2. Would the project require a variance, or other special authorization under the City Planning Code?	x				x
3. Would the project require approval of permits from City Departments other than DCP or BBI, or from Regional, State or Federal Agencies?	x				x
*4. Would the project conflict with adopted environmental plans and goals?			x		
B. ENVIRONMENTAL IMPACTS:					
1. Land Use. Would the proposed projects:					
a. Be different from surrounding land uses?			x		x
*b. Disrupt or divide the physical arrangement of an established community?			x		x
2. Visual Quality and Urban Design. Would the proposed project:					
a. Obstruct or degrade any scenic view or vista open to the public?			x		
b. Reduce or obstruct views from adjacent or nearby buildings?			x		
*c. Create a negative aesthetic effect?			x		
d. Generate light or glare affecting other properties?		x			x
3. Population/Employment/Housing. Would the proposed project:					
a. Alter the density of the area population?			x		

**Further discussion warranted

*Denotes State EIR Guidelines, Appendix G. normally significant effect.

3. Cont'd.	Yes	Maybe	No	N/A	Disc.
*b. Have a growth-inducing effect?		x			x
*c. Require relocation of housing or businesses, with a displacement of people, in order to clear the site?	x				x
d. Create or eliminate jobs during construction and operation and maintenance of the project?	x				x
e. Create an additional demand for housing in San Francisco?	x				x
4. Transportation/Circulation. Would the construction or operation of the project result in:					
a. Change in use of existing transportation systems? (transit, roadways, pedestrian ways, etc.)	x				x
*b. An increase in traffic which is substantial in relation to existing loads and street capacity?		x			x
c. Effects on existing parking facilities, or demand for new parking?	x				x
d. Alteration to current patterns of circulation or movement of people and/or goods?	x				x
e. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?			x		
f. A need for maintenance or improvement or change in configuration of existing public roads or facilities?		x			x
g. Construction of new public roads?			x		
5. Noise.					
a. Would the proposed project result in generation of noise levels in excess of those currently existing in the area?		x			x
b. Would existing noise levels impact the proposed use?	x				x
c. Are Title 25 Noise Insulation Standards applicable?			x		x

	Yes	Maybe	No	N/A	Disc.
6. Air Quality/Climate. Would the proposed project result in:					
*a. Violation of any ambient quality standard or contribution to an existing air quality violation?		x			x
*b. Exposure of sensitive receptors to air pollutants?			x		
c. Creation of objectionable odors?			x		
d. Burning of any materials including brush, trees, or construction materials?			x		
e. Alteration of wind, moisture, or temperature (including sun shading effects), or any change in climate, either locally or regionally?			x		
7. Utilities and Public Services. Would the proposed project:					
a. Have an effect upon, or result in a need for new or altered, governmental services in any of the following?					
fire protection			x		
police protection			x		
schools			x		
*parks or other recreational facilities		x			x
maintenance of public facilities			x		
power or natural gas			x		x
communications systems			x		x
water			x		x
*sewer/storm water drainage			x		x
solid waste collection and disposal			x		x
8. Biology.					
a. Would there be a reduction in plant and/or animal habitat or interference with the movement of migratory fish or wildlife species?		x			x
*b. Would the project affect the existence or habitat of any rare, endangered or unique species located on or near the site?			x		
c. Would the project require removal of mature scenic trees?			x		

	yes	maybe	no	N/A	Discuss
9. Land. (topography, soils, geology) Would proposed project result in or be subject to:					
*a. Potentially hazardous geologic or soils conditions on or immediately adjoining the site? (slides, subsidence, erosion, and liquefaction)		x			x
b. Grading? (consider height, steepness and visibility of proposed slopes; consider effect of grading on trees and ridge tops)			x		
c. Generation of substantial spoils during site preparation, grading, dredging or fill?	x				x
10. Water. Would the proposed project result in:					
*a. Reduction in the quality of surface water?			x		x
*b. Change in runoff or alteration to drainage patterns?	x				x
*c. Change in water use?	x				x
*d. Change in quality of public water supply or in quality or quantity (dewatering) of ground water?		x			x
11. Energy/Natural Resources. Would the proposed project result in:					
*a. Any change in consumption of energy?		x			x
*b. Substantial increase in demand on existing energy sources?			x		x
c. An effect on the potential use, extraction, conservation or depletion of a natural resource?		x			x
12. Hazards. Would the proposed project result in:					
*a. Increased risk of explosion or release of hazardous substances (e.g., oil, pesticides, chemicals or radiation), in the event of an accident, or cause other dangers to public health and safety?			x		
*b. Creation of or exposure to a potential health hazard.			x		
*c. Possible interference with an emergency response plan or emergency evacuation plan?			x		

13. Cultural. Would the proposed project:	Yes	Maybe	No	N/A	Disc.
*a. Include or affect a historic site, structure, or building?	x				x
*b. Include or affect a known archaeological resource or an area of archaeological resource potential?		x			x
*c. Cause a physical change affecting unique ethnic or cultural values?	x				x

MITIGATION MEASURES:	Yes	No	Disc.
Are mitigation measures included in the project?	x		x
Are other mitigation measures available?	x		x

ALTERNATIVES:

Were other alternatives considered:	x		x

MANDATORY FINDINGS OF SIGNIFICANCE:

*1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal, or eliminate important examples of the major periods of California history or prehistory?		x	x
*2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	x		x
*3. Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and probable future projects?)	x		x
*4. Would the project cause substantial adverse effects on human beings, either directly or indirectly?		x	
*5. Is there a serious public controversy concerning the possible environmental effect of the project?		x	

On the basis of this initial evaluation:

____ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.

____ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers____, in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.

✓ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Robert W. Passmore
Assistant Director-Implementation

for

Dean L. Macris
Director

Date: 5/27/81

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San Francisco Progress
815 Howard Street
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Table B-1

CHANGE IN PILES (BAY FILL)

IN SQUARE FEET

	BUILDING				PUBLIC				TOTAL			
	Existing	Proposed	Change	%	Existing	Proposed	Change	%	Existing	Proposed	Change	%
Ferry Building	40,651	41,260	609	1.5	367	586	219	60	41,018	41,846	828	2
Pier One	2,893	16,629*	13,736*	475	2,042	2,145	103	5	4,935	18,774	13,839	280
Agriculture Building	360	574	214	59	61	0	-61	-100	421	574	153	36
North Plaza	0	0	0	0	3,525	117	-3,408	-97	3,525	117	-3,408	-96
South Plaza	0	0	0	0	143	135	-8	-6	143	135	-10	-7
BART Deck	0	0	0	0	1,173	763	-410	-35	1,173	763	-410	-35
TOTAL	43,904	58,463	14,559	33	7,311	3,746	-3,565	-49	51,215	62,209	10,992	21
TOTAL W/O GARAGE (approx.)	43,904	41,834	-2,070	-4.7	7,311	3,746	-3,565	-49	51,215	45,580	-5,635	-11

* Includes garage in Pier One bulkhead building.

Source: Peter Culley Associates, Structural Engineers

Table B-2

CHANGE IN DECK AREAS (BAY FILL)

IN SQUARE FEET

	BUILDING				PUBLIC				TOTAL			
	Existing	Proposed	Change	%	Existing	Proposed	Change	%	Existing	Proposed	Change	%
Ferry Building	111,900	119,020	7,120	6	5,040	21,581	16,541	328	116,940	140,601	23,661	20
Pier One	83,455	87,804*	+4,349	+5	30,061	26,341	-3,720	-12	113,516	114,145	629	1
Agriculture Building	15,667	20,750	+5,083	+32	5,754	0	-5,754	-100	21,421	20,750	-671	-3
North Plaza	0	0	0	0	63,700	26,700	-37,000	-58	63,700	26,700	-37,000	-58
South Plaza	0	0	0	0	18,160	17,410	-750	-4	18,160	17,410	-750	-4
BART Deck	0	0	0	0	65,791	54,704	-11,087	-17	65,791	54,704	-11,087	-17
TOTAL	211,022	227,574	16,552	8	188,506	146,736	-41,770	-22	399,528	374,310	-25,218	-6

* Includes garage in Pier One bulkhead building.

Source: Peter Culley Associates, Structural Engineers.

TECHNICAL MEMO

Proposed Plans for the Ferry Building and Their Consistency with the Design Guidelines for Restoration and Adaptive Use of the Union Depot & Ferry Building

Analysis of Effect to the Agriculture Building: Seven Alternatives

Prepared by:

Charles Hall Page & Associates, Inc.
San Francisco, California

July 1, 1981
Revised August 1981

INTRODUCTION

This technical memo reviews the proposed redevelopment actions for both the Ferry Building and the Agriculture Building. Actions affecting the Ferry Building are assessed in relation to their consistency with the Design Guidelines for Restoration and Adaptive Use of the Union Depot & Ferry Building developed by Charles Hall Page & Associates, Inc. in 1978. These guidelines were prepared for the San Francisco Port Commission and have been incorporated into the Development and Disposition Agreement between the Port Commission and Continental Development Corporation. They address appropriate and potential kinds of changes for the exterior facades and the interior public concourse areas of the property consistent with the Secretary of Interior's Standards for Rehabilitation.

The Design Guidelines are not intended to outline a specific course of action for restoration and adaptive use of the Ferry Building. Such a level of detail is possible only after the developer and architect explore the many legal, structural, environmental and market considerations. These considerations are currently under investigation by developers of the Ferry Building and plans for the project are still at the preliminary conceptual design stage. This memo, therefore, assesses the information and plans available at this time (July 1981) and does not examine the more detailed aspects of the works to be presented later.

Plans for the Agriculture Building are not final at this time. In order to assess potential effects to the structure, seven possible alternatives are presented and analyzed. No specific guidelines exist for the Agriculture Building so the Secretary of Interior's Standards for Rehabilitation have been used as the basis for this analysis.

SIGNIFICANCE

The Ferry Building (Union Depot and Ferry House) is one of San Francisco's most prominent and historically significant structures. It was commissioned in 1894 and officially opened on July 13, 1898. From its completion, until the late 1930s, the Ferry Building served as the entrance to the city for 50 million bay commuters a year, making it the second busiest passenger terminal in the world.

The building is significant not only for its important role in the development of San Francisco but for its contribution to turn-of-the-century architectural and engineering history. Built in the Neo-classical Beaux-Arts style, the Ferry Building extends for 659 feet along the city's waterfront. The enormous stretch of the building is centrally punctuated by a 235 foot square clock tower modeled after the 12th century Giralda Tower of the Cathedral of Seville. Its steel frame design includes steel columns, girders, beams and diagonal rods supporting brick walls and sandstone facing. The claim made in 1898 that the Ferry Building was the most solidly constructed edifice in California was tried and proven by its survival of the 1906 earthquake.

The Ferry Building also is known as the last large commission of the prominent San Francisco architect A. Page Brown. Brown designed the building but died shortly after contracts were let on December 26, 1895.[1]

In recognition of the Ferry Building's historical and architectural significance, it was placed on the National Register of Historic Places in 1978. The building also is a San Francisco Landmark and a National Historic Civil Engineering Landmark.

More detailed architectural and historical information are found in the National Register nomination form and the San Francisco Landmarks Preservation Advisory Board Final Case Report.

CHANGES TO THE FERRY BUILDING OVER TIME

1898 Ferry Building officially opened for ferry service.

1903 State offices in the building completed.

1906 Stone sheathing and brick wall of the tower removed, structural repairs made, and lightweight reinforced concrete used to recreate the original design of the tower. The concrete facing of the exterior was painted to match the Colusa sandstone of the rest of the Ferry Building.

c. 1915 Lower portions of the major northern and southern arches in the central entrance pavillion closed with latticework sashes. Southernmost arcade bays on the street level opened. Open canopy added to the end of the south wing to serve as the baggage room for the Southern Pacific. Large neon lettering installed along the upper story roof-line facing the Bay.

1916-20 Iron pedestrian overpass installed to span the Embarcadero from the second floor level of the entrance pavillion to Market Street.

1927 Small second floor added to gallery bay of Ferry Building, roof trusses raised to accommodate the change.

1942 Pedestrian overpass removed.

1954-55 North wing essentially demolished, leaving only roof, west facade and structural elements; reconstructed to house the offices of the World Trade Center. Mezzanine extended to develop a second floor level. Shear walls added to north wing. Elevators and two new stair wells added to north wing. Suspended and braced ceiling placed above the full third floor. Rising tiered facade on the bay side replaced by a broad wall with a series of small windows. Many north wing lattice windows removed or blocked out and street level arcade changed to windows and a canopy. Cocktail bar added to facade.

1957 Embarcadero Freeway constructed to the west of the Ferry Building.

1958 Southern Pacific baggage room removed from south wing.

1961-62 South wing interior converted into office space by extending mezzanine into full third floor level, and hanging a ceiling from the steel trusses. Gable roof over gallery removed and replaced with new flat deck.

Two coats of gunite applied to outside walls of tower to repair extensive spalled areas, holed-through sections and large expanses of exposed reinforcing bars. Random cracking repaired with epoxy injection.

PROPOSED PLANS AND THEIR CONSISTENCY WITH DESIGN GUIDELINES

The following section analyzes aspects of the proposed redevelopment plans for the Ferry Building and assesses their consistency with the Design Guidelines for Restoration and Adaptive Use of the Union Depot & Ferry Building. The specific guidelines (or a condensed version), as well as background information from that report, are indicated in italics.

General Principles

1. The basic form of the (original) Ferry Building should be reestablished whenever possible.

In general, the basic form of the Ferry Building is maintained in the proposed plans. The only inconsistency with this guideline is at the rear of the building where the development of an atrium in the central pavillion space creates a large opening which visually divides the structure into two elements, rather than a continuous whole.

2. Symmetry and rhythm are distinctive qualities of the Ferry Building; arches are manifestations of these qualities and should be reestablished where deleted.

The qualities of symmetry and rhythm are respected in the designs for the restoration of city-side and new construction of the bay-side facade. The reestablishment of arch forms has not been utilized in the proposed design except at the north and south facades where a new oversized arched window is proposed for the second bay. The size of the arch form is out of scale with the original design and at the south facade will necessitate the destruction of an existing arch.

3. Public use and enjoyment of the Ferry Building needs to be reestablished, especially on the ground floor and within the central pavillion.

Proposed plans reestablish the Ferry Building as an inviting public and private space. Reuse of the building for more intensive commercial, office and public use and development of the site will encourage activity and utilization of the building. The ground floor will become the principal public area, although at the expense of the second floor level which originally served this function (to be discussed in greater detail). A central lobby will be reestablished and actually enlarged through the removal of the second floor level and creation of an atrium space connecting the front and back of the building.

4. City-side facade should be restored. The bay-side offers opportunities for imaginative modification. The north and south facades should be restored and extension of either wing is undesirable.*

Restoration is suggested for the city-side, north and south facades because of their visibility and importance in the original design. The bay-side facade has traditionally exhibited a less formal appearance and thus offers the opportunity for a less restrictive treatment.

In general, plans conform with a restoration scheme for the city-side facade. Two exceptions are plans for the arcades and main entrance portals (to be discussed

** "Restoration is defined as the act of accurately recovering the form and details of a property as it appeared at a particular period of time by means of removal of later work. This activity is distinct from "rehabilitation" which is the act of returning a property to a state of utility, through repair or alteration to make possible an efficient contemporary use while preserving those portions or features of the property which are significant to its historical, architectural, and cultural value.*

in greater detail). Plans for the bay-side facade are sympathetic with the original design and are generally in conformance with the guidelines. The plans for the north and south facades are not strictly restoration schemes. Specifically, design of the roofline of the third bay as flat rather than gabled, and square window designs are not in conformance with this guideline. An arcade to link the Ferry Building to Pier 1 is not shown in the plans.

5. The third bay roof may be raised.

The third bay roof is to be raised to accommodate a fourth level. This action complies with the Design Guidelines although the shape of the roofline indicated as flat, is out of character.

6. Modification to the facades and roofs should reflect consistent design and material applications.

In general, modifications to facades and roofs are consistent with the Design Guidelines. The exception to this is the proposed flat roofline of the third bay and its effect on the north and south facades.

7. Tower to be opened to the public if possible.

This action is not feasible due to code restrictions.

8. City-side facade to be cleaned and have a "fixed" color; other facades to match.

Methods and materials are not specified, but plans call for cleaning of the facades and tower. This is consistent with Design Guidelines.

9. Bay-side facade can use steel and glass in addition to other materials.

The proposed plans are in conformance with the Design Guidelines.

10. No mirror or tinted glazing should be used on exterior areas of the building.

Mirrored and tinted glazing could add an unsuitable modern look to the windows and openings of the building. These materials are acceptable, however, for use in areas that are not visible such as roof skylights. The proposed plans do not indicate the use of mirrored or tinted glazing and are in conformance with the Design Guidelines.

Specific Design Guidelines

City-Side Facade

In recent years many changes have been made to the Ferry Building's city-side facade. As the formal and ceremonial facade of the building, it should be returned to an approximation of its original condition. While it is not desirable, nor possible, to return it to its precise past appearance, it nevertheless is possible to remove certain elements which detract from the original design, and to restore or reestablish certain elements which are in character with the original facade.

1. Restore north city-side facade to the depth of the existing arcade.

The arcades of the city-side facade were designed as linear spaces to reinforce the monumental length of the building. They also provided a pass-through to the main entrance and accommodated north-south circulation. The subsequent enclosure of the north arcade has disrupted both the circulation function and the original design by dividing the structure into halves different in appearance, rather than a continuous whole.

According to the proposed plans, the north arcade would be not be restored to its original condition but would be retained as an enclosed space. This treatment is mitigated by the removal of the awnings and other contemporary equipment and the plans for the south arcade which call for its enclosure with a similar, shear glass sheathing. Both actions, although not in strict conformance with the Design Guidelines, are acceptable.

2. Cocktail lounge to be removed.

The original appearance of the city-side facade has been disrupted by the construction of the cocktail lounge. The proposed removal of this inappropriate later addition will assist in returning the facade to its original condition.

3. Awnings, canopies, and air conditioning units to be removed.

These additional pieces of equipment obscure architectural details, block windows and in general, create a fragmented appearance on the city-side facade.

Proposed plans, which indicate removal of existing awnings, canopies, and air conditioning units, will contribute positively to the appearance of the city-side facade and are consistent with the Design Guidelines.

4. *Existing aluminum sash to be removed and replaced with original design windows.*

In 1955 when the northern half of the building was remodeled for the World Trade Center, all existing original windows (including those in the northern section of the entrance pavilions) and frames were removed and replaced with bright aluminum framed windows completely different in design from those remaining on the southern half of the facade.

Plans call for restoration of most of the windows and spandrels of the city-side facade with the exception of the three main entrance portals. Plans show partial removal of the glazing of the two southern portals to the spring line of the arch. This treatment of the main portals could have a significant impact upon their appearance and also would destroy their existing stone lintels and fenestration. The removal of these existing features is not compatible with a restoration of the city-side facade and is more accurately a rehabilitation action.

5. *Decorative muntins [2] to be restored.*

Plans indicate conformance with this guidelines for some, but not all the windows of the main facade. The top portion of the decorative muntins in the arches of the main entrance portals may be retained. These actions are thus only partially in conformance with the Design Guidelines.

General discussion: The proposed plans for the city-side facade are generally consistent with the Design Guidelines which recommend its restoration. The removal of later, modern additions such as awnings and air-conditioning units are positive actions which will assist in restoring the facade to its original as-built appearance. The closing of the south arcade with glass sheathing is a

conditionally acceptable action so long as it will have minimal visual effect upon the building as it appears today.

Bay-Side Facade

The image of the bay-side facade should complement the image of the building as a whole. From the Bay, the Ferry Building originally was perceived as a series of parallel gable roofed structures running the entire length of the building, each decreasing in height in a progression towards the Bay. Smaller gable-roofed structures projected out toward the ferries. This progression resulted in a layered or stepped facade. Through alteration over the years, not only has the stepped facade disappeared, but the continuously linear and rhythmic qualities of the original appearance have disappeared.

Complete modification of the bay-side facade is recommended. The only overriding guideline with respect to modification of the facade is that it be done in a manner which respects and reinforces the geometry of the original building as a continuous whole along its bay-side facade.

1. The third and fourth bays should read as individual, visually articulated units of decreasing heights. Vertical differences must occur between the third and fourth bays. All vertical elements must occur at column lines, and no vertical wall is to be greater than two stories.

The rear of the Ferry Building did not appear as a single monumental facade. Instead, it featured a complex series of roofs and walls with a uniform rhythm. Later additions have interrupted this rhythm -- at the north wing, the rising tiered facade has been replaced by a broad wall with a series of small windows contrasting in appearance with the south wing.

Plans call for demolition and rebuilding of the rear facade, extending it approximately 20 feet. The four-bay configuration will be retained and the vertical differential between the third and fourth bays will be respected. No vertical wall along the bay-side facade will be greater than two stories in height. These actions are consistent with the Design Guidelines.

2. Changes to the bay-side facade should return to its linear and planar form, with a uniform rhythm.

Plans indicate a series of levels which will be seen as linear and symmetrical as recommended by the Design Guidelines. The creation of an atrium space in the center of the building visually divides it in half, however, and interrupts the linear form of the facade.

3. A primary central entryway should be developed.

The development of the atrium opening will create a primary central entryway which will facilitate circulation between the front and the rear of the building. This function is consistent with the Design Guidelines although it creates a new visual image (as discussed above). In general, however, these actions are consistent with the intent of the Design Guidelines.

4. Boiler facility to be relocated to interior if possible.

The boiler facility is currently located in a metal shed to the rear of the Ferry Building. Proposed plans do not specifically address this issue but removal of the shed is indicated. This action is consistent with the Design Guidelines.

5. *The elevator and mechanical towers should not be visible from the bay.*

At this time proposed plans do not address this issue specifically.

6. *The gable roof profile of the third bay should remain as it now is, although the roof may be raised.*

Plans call for raising the roof of the third bay, as consistent with the Design Guidelines. The profile of the roof, however, is indicated as flat. This aspect of the design is inconsistent with the guidelines which recommend a gable roof or evocation of a gable roof.

7. *The length and width of each bay is important and should be retained.*

Plans call for the extension of the new fourth bay beyond the existing facade line of the north and south elevation. This extension will have little visual impact on the bay-side of the Ferry Building but it will affect the north, south, and city-side facades where it will be visible as an extension.

8. *Continuous public access should be provided along the full length of the bay-side facade at ground level.*

As originally constructed, the rear arcade was defined as a space by the waiting room wall and the floor of the gallery above. In spite of its informal definition, this walkway served an important function and will continue in importance as activity in the rear of the Ferry Building is increased and as the site is improved. Plans call for redefinition of the rear arcade as consistent with the Design Guidelines.

General discussion: The proposed plans for the bay-side facade are generally consistent with the Design Guidelines and respect the original design of stepped down tiers.

North and South Facades

When viewed from the north and south, each bay of the Ferry Building originally was seen as a complete unit. A forward or backward step at the column line of each bay, as well as gable roofs over the second, third, and fourth bays, helped to accomplish this. The articulation of each bay along with the large arches and windows created a strong rhythm along each of these facades.[3]

Both the north and south facades have been changed drastically over the years. Window openings and doors at both facades have been eliminated and replaced with new materials. The gable roof of the third bay has been modified and appears flat in profile.

1. The end gables of the second and third bays of the north facade must be restored.

Plans for the north facade show the second and third bays as distinctive units consistent with the Design Guidelines. There is divergence with the guidelines, however, in the proposed flat roof profile for the third bay.

2. The arches and windows originally in the second and third bays of the north facade are to be replaced where they have been altered or removed.

Proposed plans indicate replacement of the existing modern openings in the second bay with an arched window that is larger in dimension than the original. At the third bay, square fenestration is proposed. These actions are not consistent with the Design Guidelines.

3. Public entrances into the north and south facades should occur only at the arcades at the east and west ends, and at no other location along the facade.

The main entrance at the second bay is compatible with the proposed interior modifications. Therefore, although not strictly in conformance, it is acceptable.

4. The roof parapet wall on the first bay must be retained.

The proposed plans for the first bay are consistent with the Design Guidelines.

General Discussion: Although not specifically addressed in the Design Guidelines, the standards for the south facade are similar to those presented for the north. Plans indicate replacement of the existing arched window in the second bay of the south facade with an arched window larger in size than the original. This would destroy original fabric and create a new window of similar shape but different dimensions. This action is not consistent with the Design Guidelines.

Interior Public Spaces

There are several types of public spaces and concourses which belong to the Ferry Building: lobbies, passageways, and arcades. All of these public areas are essential to circulation within and around the building. The major flow of pedestrians through the building along an east-west axis should occur at the

centerline of the building. Additional east-west circulation should occur at secondary passageway locations. Major north-south circulation at the ground level should occur along or within the city-level arcade or walkway. Primary circulation into upper levels of the building will utilize elevators to be located in the central lobby area.

As constructed, the first floor (street level) of the Ferry Building was used as a service area and for waiting and smoking rooms. The second level, above this, was the primary public space. Users of the building climbed up to the upper level or "nave" which ran the full length of the building. At its center was an inlaid tile mosaic of the "Great Seal of the State of California."

Today the nave area no longer exists due to the addition of new floors and walls. Of the two stairways leading from the street level to the lobby, only one remains. Its function as an entrance to a grand space has been destroyed by the construction of a wall only a few feet away from the top of the stairs.

To discuss the specific guidelines for interior spaces, an explanation of the proposed plans is necessary. Many aspects of the plans were not anticipated in the development of the Design Guidelines so in some cases guidelines are not applicable to the proposed action.

The basic concept of the proposed plans is to convert the ground level to the major functional space for the Ferry Building. To achieve this, plans call for removal of the original floor of the second level for the length of the nave to create a larger, higher space from the ground level. The floor of the second level in the central pavillion area also would be removed to open up the area from the front of the building to the back and to create a large atrium space.

With the nave and central portions of the second level removed, the only portions of the floor space retained would be those along the front and back of the building. Access to the areas would be via bridges across the open nave space.

At the third level, sections of the non-original floor slabs in the nave area and original flooring in the central pavillion would be removed. As on the second level, bridges crossing the nave and atrium spaces would provide access to uses at the east and west ends of the building.

These actions will result in a change in the architectural concept of the original design in which the second floor served as the principal public space. The ground floor, originally a service area, would assume primary importance and much of the second level actually would be eliminated.

Changes in wall and floor configurations will have a significant impact on existing historic interior finishes including mosaic flooring,[4] marble walls, and brick arches.

Ground Level

1. A second stair should be reconstruced to replace the missing original stair. Both stairs should open directly onto a new second level lobby.

Plans indicate removal of the existing original southern stair to open up the entrance to the ground floor level. Access to the remaining portions of the second level would be via elevators and stairs from the ground level. No direct access from the street level is planned.

The removal of the existing stair and resulting loss of access to the second level from the street is not consistent with the Design Guidelines.

2. The main lobby on the ground level should be enlarged to encompass the entire area of the second bay, and correspond in width to the three major bays of the central pavillion.

A major element of the proposed plans is enlargement of the ground level lobby as recommended in the Design Guidelines.

3. The ground level lobby should reestablish major access from the bay-side to the city-side directly through the building.

Proposed plans indicate development of a three-story atrium in the center of the building. This action would reestablish east-west circulation and access from the front to the rear of the building as recommended.

Second Level

1. Central pavillions uses should complement the central lobby space.

2. Careful consideration should be given to areas just east of the central lobby.

3. The tower elevator should terminate at the second level lobby.

4. Flooring in the second level lobby should be of durable and neutral materials.

These specific design guidelines are not applicable to the existing scheme which proposes extensive interior modifications at the second level central lobby area.

Third Level

1. The third floor should be opened up at both the north and south ends of the second and third bays.

Plans indicate that the third level would be opened up at the second bay, as consistent with the Design Guidelines.

Central Lobby

As originally built, the main lobby on the second level extended the entire length of the building. Within the second and third bays, the lobby was open to the roof. This grand space, with its steel and brick arches and skylights, has all but disappeared through the years as additional floor space was constructed. Nowhere in the present building can one get the feeling of the original space. The importance of reestablishing a grand space within the building's interior cannot be underestimated.

1. The central lobby[5] of the building should be returned to the scale and sense of openness of the original design. The second level lobby should read as a coherent whole. The roof and skylights should be made visible again.

The plans do recreate a lobby space within the Ferry Building which is large and open. To achieve this however, the original second level lobby is destroyed by the removal of the floor slab in this area. The resulting ground floor lobby

space larger in scale than the original lobby. The roof and skylights will be made visible again as recommended.

2. New structural trusses should resemble the original ones.

Proposed plans are consistent with this guideline.

3. New elevators to be installed should be symmetrical to the existing ones.

Proposed elevator banks will be located symmetrically in conformance with the Design Guidelines.

Arcades

1. Arcades should serve as primary means of access to retail uses and public services on the ground floor. The arcade along the north wing must be reestablished in a width identical to that of the south arcade.

Although the proposed plans indicate a treatment considerably different from the recommendations of the Design Guidelines, they are acceptable. The plans call for retention of the north arcade as an enclosed space. The presently open south arcade would be enclosed by a glass sheathing. This action changes the function of the arcade as a walkway and pass-through space but it would have minimal visual impact upon the city-side facade.

2. A bay-side arcade (if established) should be approximately the same width as the city-side arcade.

The design of the bay-side arcade indicates that it would be approximately the same width as the original city-side arcade.

3. Arcades should be lively spaces with (1) storefront fenestration, (2) open air merchandising, (3) ceiling graphics, and (4) continuous floor materials.

The development of retail space in the south arcade is consistent with the Design Guidelines. The details of converting this space are not yet determined.

4. Secondary passageways should be located at the square openings on the city-side facade.

This specific action has not been addressed in the proposed plans.

Tower

The tower is one of the most prominent landmarks in the Bay area, and offers spectacular views of the city, particularly down the length of Market Street. Presently, it is inaccessible to the public.

1. Public access to the tower should be provided.

This action is not addressed in the proposed plans.

2. The clockworks should be made visible.

This action is not feasible.

3. The addition of an observation areas should not disturb the facade of the tower.

This guideline is not applicable since no observation area is proposed.

Roof

1. The roof should be perceived as a series of bays and monitors, symmetrically placed with a uniform treatment. Monitors should be replaced where necessary.

Plans indicate retention of the general roof configuration so that no changes are visible from either the bay- or city-side.

2. New skylights may be used in the first bay; they must be of flat glass and not the "bubble" type.

Plans indicate new skylights which are consistent with the Design Guidelines.

3. All mechanical equipment should be relocated to one or two central, unobtrusive penthouses.

This specific action has not been addressed in the proposed plans.

Signs

The Ferry Building is one of the most prominent and well known landmarks in the Bay area. As such it serves as its own symbol and does not require any new

exterior signage. The "Port of San Francsico" roof sign adds to the character and image of the building and is a contributory element to the landmark quality of the building.

1. New exterior signs should be permitted; the "Port of San Francisco" sign should be retained and restored.

Consistent with the Design Guidelines, The "Port of San Francisco" sign will be retained.

2. Interior signs visible from outside the building should be permitted on the north, south, and bay-side facades.

3. Signage for ground floor commercial activities must be confined to the arcades and other interior passageways.

4. Signage design criteria should be established.

5. Uniform signage and graphics should be established.

Proposed plans do not show this level of detail so analysis of consistency with the Design Guidelines is not possible.

Attachments and Lighting

1. The use of banners and flags is encouraged.

2. Floodlighting the building is encouraged.

Plans are to light the building with small bulbs, as in the 1915 Exposition.

3. Exisitng TV antennaes and other wires are to be removed.

Proposed plans do not show this level of detail so analysis of consistency with the Design Guidelines is not possible.

Site Guidelines

Without question, major changes in the character of the Ferry Building over recent years stem as much from land use and circulation changes in the immediate area of the building as they do from alterations to the building itself. Construction of the elevated Embarcadero Freeway facility in 1958 resulted in two radical changes to the Ferry Building: one, the physical presence and noise levels of the freeway facility overwhelmed the Ferry Building; and, two, the freeway facility visually and functionally severed the Ferry Building from the city. No longer could one look down Market Street and see the Ferry Building; only the tower remained visible above the second deck.

Other major changes in the area also have affected the building significantly. Market Street no longer terminates at the Embarcadero on the doorstep of the Ferry Building; instead, it takes a dog-legged turn at the Southern Pacific Building. Parking stalls and chain-link fencing now occupy an area on axis with Market Street, an area where for years the Market Street streetcar lines executed their turnabout. And construction of the BART tube in the mid-1960s resulted in construction of a large platform and ventilation housing east of the Ferry Building, now occupied in part by the new ferry terminal facility of the Golden Gate Bridge, Highway and Transportation District. Finally, where the Ferry Building once

commanded a prominent position along the Embarcadero when viewed from the Bay, the structure now is overshadowed by the dramatic silhouette of the downtown skyline.

Although the developer of the Ferry Building has considerable responsibility for site improvements many of the improvements affecting the site and surrounding area must be undertaken by the public sector. Sidewalks, streets, and elevated highways are a few of the areas which are publically controlled. The following will address only those site improvements planned by the developer at this conceptual stage.

General Principles

1. The Ferry Building and Market Street should be reconnected to one another.

In general, the site plans are consistent with the guidelines.

2. All physical and visual barriers to use and enjoyment of the Ferry Building should be minimized in the area between the western facade of the building and the terminus of Market Street.

The public sector (at the local, state, and federal level) holds much of the responsibility for such improvements. The developer's plans are in accord with the guidelines.

3. Changes of use within the immediate vicinity of the Ferry Building must be consistent with and complementary to the special character of the building.

Preliminary design plans call for retention of the front of the building as an open area, removal of obstructions between the Ferry Building and Pier 1 and improved access to Market Street. These actions are consistent with the Design Guidelines.

4. An arcade-type structure can be utilized to link the Ferry Building with Pier 1.

There are no plans to develop an arcade.

5. The existing open area between the Ferry and Agriculture Buildings should be left open.

Proposed plans are consistent with this guideline.

6. Functional connections with the Ferry Plaza should be strengthened.

Development of a central atrium between the front and rear of the Ferry Building will improve access to the Ferry Plaza. Opening up and organizing the rear area also will improve their functional connection.

Specific Site Guidelines

1. The most obvious and important area for site improvement is the connection between the front of the Ferry Building and the terminus of Market Street. Barriers should be removed and altered to reestablish and improve pedestrian and visual access.

Existing barriers include a concrete and earthen wall, two rows of trees, six lanes of traffic, the piers and platform of the Embarcadero Freeway, four rows of parked automobiles, concrete walkways and cyclone fencing, and the tracks and right-of-way of the Belt Railroad. Removal of these barriers is the responsibility of the public sector.

2. Metered parking spaces adjacent to the arcades of the north and south wings should be removed and sidewalks should be widened.

Proposed plans are consistent with the Design Guidelines.

3. Preserve the area to the south of the Ferry Building as an open area to provide access to the Ferry Plaza and the Agriculture Building.

Proposed plans are consistent with the Design Guidelines.

4. Pedestrian access to the Ferry Terminal should be principally through the Ferry Building concourse, and a uniform paving material should be used along the bay-side facade.

The development of an atrium running through the center of the Ferry Building will encourage pedestrian access to the Ferry Plaza. A uniform paving system is proposed for the length of the bay-side facade.

5. An arcade-type structure is recommended to connect the Ferry Building and Pier 1. No trees or other large, bulky, or heavy objects should be permitted.

The area between the Ferry Building and Pier 1 is indicated as open with no structures or arcades. This is consistent with the intent to keep the area clear. The use of trees as indicated on the plans is acceptable since they will not be densely planted.

General discussion: Although site development plans are still at the preliminary stage, they appear to be consistent with the Design Guidelines. Further information on possible public improvements is necessary in order to analyze the site developments in a comprehensive manner.

FOOTNOTES

1. There are differences between A. Page Brown's original design and the Ferry Building as it was actually constructed. The original 1893 rendering indicated a building 840 feet long with grand colonnaded pavilions at either end. Later that year the Harbor Commissioners instructed Brown to eliminate the end pavilions and design a foundation only 660 feet long. Subsequent plans for the north and south facades indicated walls with trim matching the west facade. As an economy measure, and to provide more cash for the use of marble in the nave, during construction the ornament was deleted in favor of plain brick facades at the ends.

2. A muntin is a secondary framing member holding panes within a window.

3. As discussed in Footnote 1, A. Page Brown's original design called for grand pavilions at the north and south ends. In 1893, the decision was made to not construct the pavilions and to terminate the building with plain facades revealing the gabled roofs of the bays. Although not as formal architecturally as the city-side facade, the articulation of the end bays revealed the interior spatial functioning of the building.

4. The existing mosaic seal of the State of California would be preserved but removed from its present location.

5. The "central lobby" includes the three central bays of the nave.

AGRICULTURE BUILDING

DESCRIPTION AND SIGNIFICANCE

Previous research provides fairly complete documentation for the Ferry Station Post Office (Agriculture Building). The Survey of Cultural Resources (Charles Hall Page & Associates, Inc., 1977) and the National Register of Historic Places nomination form were sources for the following brief summary.

The Ferry Station Post Office is located immediately south of the Ferry Building, facing the Embarcadero opposite the foot of Mission Street. It was designed in 1914, and construction occurred between April and August in 1915. A second-floor addition to the south elevation was made in 1918. Its common name, Agriculture Building, derives from 1933 when the San Francisco Branch of the Department of Agriculture became the principal tenant.

From 1915 to 1925 the Ferry Station Post Office served as the central mail facility for San Francisco, where direct connection could be made with both ferries and streetcars for delivery purposes. The building, designed by A. A. Pyle of the State Department of Engineering, was originally constructed specifically to accommodate postal functions. The two-story block located nearest the Embarcadero contained the public lobby in the northwest corner and offices above. The one-story area towards the Bay still has some of the original roll-up garage doors which opened into the central mail processing area. This space also had a mezzanine level with look-out galleries, distribution platforms, locker rooms, storage rooms, and toilets.

Along the southern facade of the building, above the mail processing area, a second floor addition was made in 1918. This was carefully designed and constructed in proportions and materials to match the existing building. It also extended the building over the rear driveway with sheds and walkways that formerly existed near the ferry slips.

Typical of other post-earthquake construction in San Francisco, the Ferry Station Post Office is constructed of a steel frame with 12-inch brick exterior walls. It is a finely detailed modified palazzo with Renaissance ornamentation. The base blocks are Sierra white granite. Pressed red brick is laid in Flemish bond, with special patterns used around windows and second tier panels. Terra cotta ornamentation is used to imitate stone, in a complementary color of French ochre. A copper cornice forms the separation between vertical wall and the clay tile hip roof.

The original main interior lobby had a floor of pink Tennessee marble and elaborate stamp windows of ornamental iron in a classical style. Wood paneling was used in several offices. However, because the building has been occupied by numerous tenants, each remodeling its own space, very little remains of the original interior. The main surviving element is the original staircase to the second floor, located at the central entrance on the west facade.

In summary, the Ferry Station Post Office (Agriculture Building) is both historically and architecturally significant. For 10 years it served as the central postal facility for San Francisco, and it survives to this date as an excellent example of an early 20th century government building executed by the State of California.

INTRODUCTION TO ALTERNATIVES

Seven possible alternative actions were analyzed for the Ferry Station Post Office. Each one represents an architectural concept for the structure and could be developed as a construction project. A site visit was made to review building conditions, and preliminary structural information gathered by Peter Culley & Associates was considered. To the extent possible, current information regarding the building and its structure was used to make the evaluation of alternatives more realistic. Technical considerations may make some alternatives unfeasible.

The analysis of impacts discusses the various changes which are necessary for each alternative and their impact on existing conditions. At this time it is not possible to discuss impacts in relation to a specific project proposal; further analysis would be necessary later in the development process.

ALTERNATIVE 1 - RETAIN ALL BUILDINGS ON SITE

In this alternative, all parts of the Ferry Station Post Office would be retained on-site in their present configuration. (This would include both the original 1915 structure as well as the 1918 addition.)

Analysis of Impact. Because all parts of the Ferry Station Post Office have been placed on the National Register, this alternative would seem the most desirable from a preservation standpoint. It would retain all historic fabric so that future visitors and users could see both original construction and additions. However, the building has serious structural problems which may make such preservation unfeasible. It is built on timber pile foundations over both land and water which have been settling at different rates, causing serious cracking. The Port

Commission undertook repair work in the late 1960s to correct some of these foundation deficiencies, but the problems still exist. The piles also have a limited bearing capacity and may not be capable of supporting new uses. Even more serious is the present lack of any lateral force system to strengthen the building against earthquakes. Here again, the foundations may be deficient and unable to transmit lateral forces to the earth. More detailed information on technical requirements and costs is necessary, but if the decision is made to preserve the building on-site, it should be brought into full compliance with current building code requirements.

ALTERNATIVE 2 - RETAIN WESTERN, TWO-STORY PORTION OF BUILDING

This alternative would preserve the main block of the building, as viewed from the Embarcadero. The 1918 addition, as well as the original one-story wing to the east, would be demolished.

Analysis of Impact. This alternative would preserve the two-story palazzo of the Ferry Station Post Office, which is the most architecturally significant part of the building. A balanced, completed composition would remain, in contrast to the eastern portion which was originally and remains a utilitarian service-oriented structure (it also has been modified over the years). Where the original construction would be demolished, a large open area would be created on the pier. This would necessitate the design and construction of a new east facade. Further analysis of structural conditions in the remaining spaces would be required to determine the scope of work necessary to reach code conformance. Such work will likely be costly.

ALTERNATIVE 3 - RETAIN NORTH, WEST, AND SOUTH FACADES OF THE WESTERN, TWO-STORY PORTION OF THE BUILDING

This alternative would retain the most visually and architecturally significant parts of the original structure. An entirely new internal structure and roof would be built, conforming to the original massing of the two-story block.

Analysis of Impact. The portions of the Ferry Station Post Office facade which are most significant architecturally and most readily visible from public areas along the Embarcadero would be preserved. The necessity of this alternative, which substantially demolishes the original construction, would be determined at a future date following extensive structural investigation. In particular, if a new foundation system were required under the entire building, or if the superstructure was found to be beyond repair, this alternative may be the only feasible course of action to retain portions of the building. The impact of substantial demolition is lessened because most of the interior spaces have been remodeled several times since construction, and relatively little original detail remains.

ALTERNATIVE 4 - REBUILD FERRY STATION POST OFFICE

Under this alternative, the existing north, west, and south facades would be dismantled and stored. The remaining construction would be demolished, and a new foundation and structure built. The original facades would then be re-built on a new building which would repeat the massing of the original.

Analysis of Impact. As under Alternative 4, the necessity of such extensive demolition work to a National Register building would be determined by structural requirements. The most significant facades would be preserved, and the new

structure would conform to all current building regulations. Substantial demolition is a negative impact upon National Register buildings and should be minimized to the extent possible, considering technical and safety factors.

ALTERNATIVE 5 - SYMPATHETIC NEW CONSTRUCTION

The original Ferry Station Post Office may be in such poor structural condition that repair or reconstruction would not be possible. Once new foundations were installed, a new building resembling the original, in terms of massing, scale, texture, and materials, could be constructed.

Analysis of Impact. The impacts of demolition and code requirements upon the existing building (especially for foundations and lateral forces) have been discussed under Alternatives 1 - 4. This alternative should be viewed as a last resort, as visually there would be significant differences between the original and new buildings.

ALTERNATIVE 6 - NEW CONSTRUCTION

For this alternative, the site would be completely cleared. New construction could then occur in any location and in any configuration permitted by the planning code, building code, and other applicable regulations.

Analysis of Impact. This alternative would be the least desirable for the historic Ferry Station Post Office. In terms of new development, it would allow greater flexibility in design although it is unlikely that the Bay Conservation & Development Commission (BCDC) would permit more bulk than presently exists. To reduce the

impact of lost architectural and historical significance, see the following section describing mitigation measures.

ALTERNATIVE 7 - NO BUILDING

Existing construction would be removed from the site, and no new building would be permitted.

Analysis of Impact. Open areas could be developed for public use, linking the Ferry Building with the waterfront promenade. Mitigation measures for complete demolition are discussed below.

MITIGATION MEASURES

If the Ferry Station Post Office cannot be preserved in its current location, one possible form of mitigation would be to move the building, either entirely or in parts.

Moving the entire structure may be technically possible but extremely expensive. Due to obstructions in the surrounding area, it would be necessary to locate at a nearby site. Moving portions of the building would be much simpler. In particular, parts of the facade could be removed, either in sections or reconstructed piece-by-piece. An appropriate use, either free-standing or within other construction, would need to be identified.

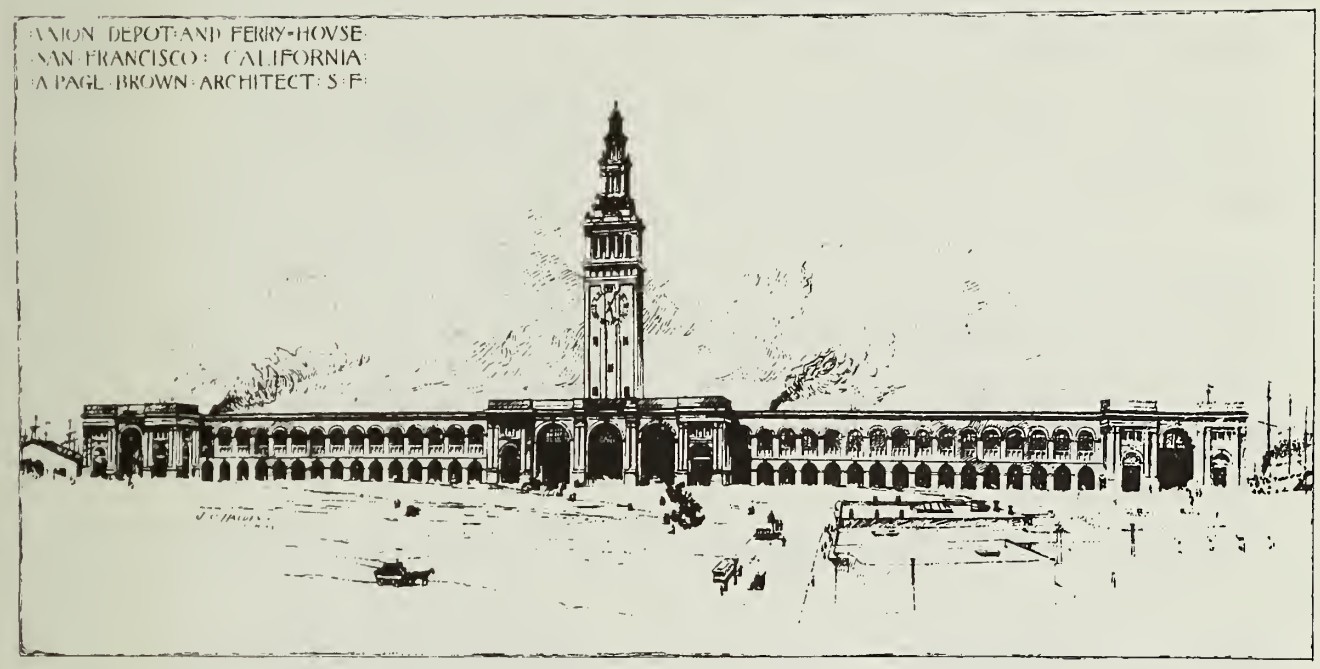
As another mitigation measure, facade elements and interior details (such as the staircase) could be salvaged during demolition. Possibilities would include incorporation in another building or re-erection as an urban sculpture. However,

these measures are not suitable preservation alternatives. Once architectural elements are removed, their connection and identity with the Ferry Station Post Office is lost.

If preservation or relocation are not feasible, the remaining available mitigation measures would be documentary and commemorative. Before any demolition were to occur, the building should be documented according to the National Architecture and Engineering Record (NAER) standards. Measured floor plans, historical research, and photographic documentation should be completed and transmitted to the Library of Congress (with copies in local libraries) for public use. Additional reminders of the building could include historical plaques, markers, or a public photographic display at the site or within other nearby development. These measures are commemorative in nature rather than a form of architectural preservation.

figure C-1

DESIGN STUDY FOR THE FERRY BUILDING



WEST ELEVATION/CITYSIDE

This photograph illustrates one design for the Ferry Building by A. Page Brown. This design differs from the design that was built in that pavillions are included at the North and South ends of the building.

source. Charles Hall Page & Associates, Inc., Architecture & Urban Planning

Historic Buildings in Site Area

There are eight buildings within a four-block radius of the site that are noted in the historic/architectural building surveys Splendid Survivors, prepared by Charles Hall Page & Associates for the Foundation for San Francisco's Architectural Heritage, 1979, and Here Today, prepared by the Junior League of San Francisco, 1968.

Splendid Survivors

9-23 Main Street
Southeast corner of Market Street
Bay Building
1909

1 Market Street
Southern Pacific Building
1916, Bliss and Faville

101-105 Market Street
Young Building
Kenitzer & Barth
1902, rebuilt 1906

115-121 Market Street
Lincoln Hotel
1913

125-131 Market Street
1911

99 Mission Street
Rincon Annex Post Office
1940, Gilbert Stanley Underwood

Here Today

65 Market Street
Southern Pacific Building
1916, Bliss & Faville

11-21 Mission Street
L'Audiffred Building
1889
put up by Hipolyte d'Audiffred

APPENDIX D: GLARE IMPACTS FROM PROPOSED SKYLIGHTS

The top photograph in Figure D-1, p. D-78, shows reflected sunlight at 8 AM on June 21, the longest daylight period of the year. Glare incidence is represented by the bright spots in the model photographs. At 8 AM, sunlight would be reflected onto portions of the Hyatt Regency Hotel, Embarcadero Four, One Maritime Plaza, Market Plaza, Embarcadero Plaza, and buildings on Sacramento and Clay Streets. By 9 AM, (bottom photograph, Figure D-2, p. D-79), glare would shift upward, falling on all the Embarcadero Center high-rises, Golden Gateway, One Maritime Plaza, the Hyatt-Regency and One Market Plaza. By 10 AM, glare would impact portions of the Embarcadero high-rises, One Market Plaza and the Union Bank Building. By 11 AM, glare would reach only the very top of Embarcadero Center Four. Between 4:30-5:00 PM on June 21, reflected light could reach the upper lanes of the Bay Bridge near the west end of the Yerba Buena Island Tunnel. Glare impacts would be reduced by local weather conditions; in San Francisco, summer days are often foggy.

Impacts for March and September would be similar to those of June, although glare impacts would occur earlier in the morning. As shown in Figure D-2, p. D-79, at 8:30 AM, March 21, glare would affect the lower residential levels of Golden Gateway Center, and would reach Embarcadero Center Three and Four by 9 AM, (bottom, Figure D-2). By 10:15 AM, glare would be reflected to the sky.

On December 21st, at 9 AM, light reflected by the project would impact the bottom of Coit Tower; one hour later, this light would be reflected into the sky.

Glare impacts would be short-term and would affect only portions of nearby buildings. Residents or workers in these buildings could experience some annoyance if they did not draw curtains or shades across windows. Glare impacts could be reduced by changing the color or angle of the glass in the project. (See Mitigation Measures, p.189)



JUNE 21 8:00 AM



JUNE 21 9:00 AM

The brightest bands on downtown buildings indicate glare from the Ferry Building project
Diffused light appearing above the model indicates glare reflecting back into the sky

source: Peter Bosselmann, U.C. Berkeley Simulation Lab

figure D-2

GLARE IMPACTS



MARCH 21 & SEPTEMBER 21 8:30 AM



MARCH 21 & SEPTEMBER 21 9:00 AM

The brightest bands on downtown buildings indicate glare from the Ferry Building project
Diffused light appearing above the model indicates glare reflecting back into the sky

source: Peter Bosselmann, U.C. Berkeley Simulation Lab

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Ms. Gloria Root
Planning, Analysis and Development
945 Front Street, # 206
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12 August 1981

Dear Ms. Root:

Allow me to take this opportunity to provide you with my professional evaluation of the cultural resources potential of the Ferry Building Renovation Project in San Francisco. In addition to the Ferry Building, the project area encompasses Pier One and the adjacent Agricultural Building. As the project proceeds to the construction stage, piles will be driven and other land modifying measures will occur which may adversely impact cultural resources of potential significance existing within the subject parcel. I have directed a number of programs of archaeological research in the immediate vicinity of the Ferry Building and believe myself to be in an advantageous position to evaluate the nature and possible importance of any cultural resources existing within the project boundaries. I am co-author of the historical volume entitled San Francisco Waterfront: Report on Historical Cultural Resources . This report, authored by Roger and Nancy Olmsted and myself, was authorized by the San Francisco Wastewater Management Program (recently renamed the Clean Water Program) in 1977. The volume traces the evolution and development of the San Francisco waterfront and attempts to locate and identify cultural resources of potential significance within the various project alignments. One of these alignments--designated C-3 in the Wastewater Program's master plan-- runs under the Embarcadero between Jackson and King Streets, immediately to the west of the Ferry Building. Based upon the findings of San Francisco Waterfront, I directed a program of archaeological research within the C-3 alignment in the summer of 1978. Among the various testing procedures employed, three mechanical exploratory borings were placed along the Embarcadero in the immediate vicinity of the Ferry Building. The results of the testing measures were submitted, in October 1978, to the Wastewater Management Program in the form of a volume entitled Report on the Potential for Cultural Resources within the C-3 Contract Area of the Channel Outfalls Consolidation Project, City and County of San Francisco. My present remarks are based upon these previous studies as well as a brief review of pertinent data specifically regarding the Ferry Building project.

It is not my intention here to reiterate the historical development of the San Francisco waterfront. Such information can be found in detail in San Francisco Waterfront and other sources. However, a few background comments are in order, particularly as they pertain to the potential for cultural resources within the present project area. During the prehistoric, Spanish, Mexican and Early American chronological periods (c.a. 2000 B.C. - 1848 A.D.), the entire project area lay beneath no less than twelve feet of water. There is, therefore, little likelihood of encountering any concentrations of cultural materials attributable to these periods during the construction

work on the Ferry Building project. With the advent of the Gold Rush, Yerba Buena Cove--which encompassed the present project area-- served as the principal anchorage for the growing metropolis of San Francisco. In 1851, for example, a total of 549 ocean going vessels from a variety of U.S., European, and Pacific ports cast anchor in San Francisco (Hittell 1878:139-140). Within the next five years, an array of wharves and connecting cross streets sprang up over the cove to receive the people and goods pouring into the expanding city. Within the vicinity of the present project area, the Commercial Street Wharf, first completed in 1849, was extended and renamed Long Wharf. The Market Street Wharf was extended from Battery Street some 600 feet into the bay. The California Street Wharf extended out at an angle to the Market Street Wharf and joined with it at present day Drumm Street. The Sacramento Street Wharf extended some 880 feet into the bay and almost intersected the Market Street Wharf.

Many of the ships anchored in Yerba Buena Cove were quickly abandoned as their crews joined the thousands of gold seekers flocking to the foothills of the Sierra Nevada. Many of the surplus vessels were converted into warehouses and used for storage. Others were refitted and sailed away while still others were broken up at Rincon Point. Archival research reveals that two such vessels--the Elizabeth and the Rome (or Roma) were deliberately sunk by a Captain Fred Lawson in the general vicinity of the modern Ferry Building as part of a scheme to establish legal title to a number of yet submerged, but potentially valuable, "water lots". However, after much archival investigation, it can be safely assumed that both of these vessels--if indeed, their remains still exist at all--lay well to the west of the present subject parcel.

Beginning in 1859, the filling of Yerba Buena Cove began. The landfill consisted primarily of Telegraph Hill shale and the abundant dune sand situated to the west of Yerba Buena Cove. It is also likely that some cultural debris was incorporated into the fill. This debris consists mainly of day-to-day items--glass bottles, fragments of ceramic plates as well as wooden and metal objects. During the 1978 pre-construction archaeological testing along the Embarcadero directly to the west of the Ferry Building, a total of three mechanical exploratory borings were excavated in an attempt to locate and identify subsurface cultural resources. All three of the 24 inch diameter probes yielded cultural specimens attributable to the late nineteenth century, but in relatively limited quantities. All of the recovered items were of the type noted above--everyday items of glass, ceramic, metal, or wood, and none of the specimens were deemed to represent unusual or significant finds.

In 1867, a zig-zag shaped seawall was put in place along much of the San Francisco waterfront. Within a few years, however, this structure was deemed inadequate to meet the needs of the growing city and a second, more impressive seawall was begun in 1878: the section of the second--and present--seawall adjacent to the present project area was begun in 1887. The origianl wharves near the site were replaced by Ferry slips the same year.

The porential for encountering potentially significant cultural resources during the present construction project appear to be quite limited. Continual dredging in the area (in association with the construction of wharves and the two seawalls) would have in all probability disturbed or removed much of the cultural materials deposited during the middle and later years of the nineteenth century. As noted above, archaeological testing procedures immediately to the west of the Ferry Building yielded no finds of demonstrable significance. In short, while one cannot rule out the possibility that isolated, unexpected finds of significance may be made, archival or archaeological research have not identified any cultural materials meriting additional study or preservation.

Based upon the above observations, I would not recommend that any further archaeological procedures be implemented in advance of or in conjunction with planned construction activities in connection with the present project. However, in the event that unanticipated finds of potential significance are made during the course of construction, it is recommended that all work in the impact zone cease immediately and until a qualified archaeologist be given a chance to examine the findings, assess their significance and make recommendations for the appropriate mitigation of adverse impacts thereto.

I hope that the preceding pages have answered your questions concerning the potential for archaeological resources within the subject parcel. If I can add anything further on the matter, please do not hesitate to contact me.

Sincerely yours,

Allen G. Pastron

Allen G. Pastron, Ph.D.
President, Archeo-Tec

AGP:jn

APPENDIX F: TRANSPORTATION

Existing Transportation Setting

The existing local street network, transit services, vehicle access, parking, pedestrian circulation, and truck-loading facilities are discussed in this section in order to assess the project's impacts on these areas.

Local Street Network: The project is located on the Northeastern Waterfront of the city and would be served primarily by The Embarcadero Roadway. In subsequent usage "The Embarcadero" refers to the Roadway as opposed to the Freeway. The Embarcadero is a two-way major thoroughfare with two lanes in each direction. A wide median containing columns which support the double-decked Embarcadero Freeway separates the northbound and southbound portions of the roadway in the vicinity of the site.

The single tracked State Belt Line Railroad operates within the median of The Embarcadero with an existing average level of usage of one train per day. Lane widths on The Embarcadero vary from 11 feet 6 inches to 13 feet 6 inches. The southbound portion of the roadway weaves between columns supporting The Embarcadero Freeway between Broadway and Howard Street, creating several divergences in the roadway which are often confusing to motorists. In addition, the lack of street striping, curb barriers, and other basic street features compounds the difficulty of driving on The Embarcadero.

Other major thoroughfares in the vicinity as designated by the Transportation Element of the San Francisco Comprehensive Plan include the Clay and Washington Streets one-way pair (Washington Street is one-way westbound west of Drumm Street) and Market, Steuart, Howard and Harrison Streets which operate as two-way streets in the vicinity of the project. Transit preferential streets in the vicinity as designated by the Comprehensive Plan include Market, Mission and Steuart Streets. Exclusive transit lanes exist on Mission Street. If the Muni E-line is put into service, then it is likely that The Embarcadero would be redesignated as a Transit Preferential Street.

Vehicle Access: The Embarcadero Freeway is the Major vehicular access route to the project site from the Bay Bridge and U.S. 101. While the freeway structure passes immediately to the west of the site, the closest off-ramps are located at the intersections of Main and Mission Streets and Washington and Davis Streets. Vehicles exiting the freeway via the Main Street off-ramp currently can reach the site via Mission Street and The Embarcadero. Vehicles using the Washington Street off-ramp can reach the site via Sansome Street northbound, Jackson Street eastbound, Drumm Street southbound, Washington Street eastbound and The Embarcadero southbound.

On-ramps accessing The Embarcadero Freeway are located at the intersections of Clay and Davis Streets and Mission and Beale Streets. The Clay Street ramp can be reached from the project via Washington, Battery and Clay Streets; the Beale Street ramp can be accessed via Mission Street.
Access to the Golden Gate Bridge can be gained via the Broadway tunnel to Van Ness Avenue and Lombard Street or via Bay Street and Marina Boulevard.

Existing Transit Services: The proposed project is accessible by all modes of public transit serving the commuter within the San Francisco and the Bay Area. The site historically has been a center of transit activity. The San Francisco Municipal Railway provides over thirty transit lines which pass within 2,000 feet of the project, with service on The Embarcadero, Market, Mission, Sacramento, and Clay Streets. A major Muni bus terminus exists at Steuart and Mission Streets. BART can be reached via the Embarcadero station at Market and California Streets. Golden Gate Transit ferries to Sausalito and Larkspur can be reached from the terminal on the site, while Golden Gate Transit buses stop approximately six blocks away on Fremont at Market (out-bound) and on First at Market (inbound). The Red and White ferry to Tiburon also docks at the site. SamTrans buses operate on Mission Street to the Transbay Terminal. AC Transit buses can also be accessed from the Transbay terminal, approximately six blocks from the site.

Existing Parking Supply: The Port of San Francisco reported that it operates 209 short-term metered parking spaces on and in the vicinity of the site. Sixty-six of these spaces are off-street spaces in front of the Ferry Building, with the remaining 143 being on-street spaces along The

Embarcadero. All metered spaces operated by the Port are two-hour meters, while all meters operated by the Department of Public Works elsewhere in the downtown area are either one hour or thirty minute meters. The Port meters operate seven days per week from 7 a.m. to 7 p.m. Occupancy of these spaces is very high on weekdays (above 90 percent) but approximately 50 percent on weekends. The turnover rate appears to be governed by the two-hour maximum parking period.

TABLE F-1

LONG TERM PARKING INVENTORY IN FERRY BUILDING AREA [1]

LOCATION	PARKING SPACES
Pier 1	230
West of The Embarcadero	
Broadway to Pacific	30
Pacific to Pier 3	24
Subtotal	54
Under The Embarcadero Freeway	
Pier 3 to Washington	25
Washington to Clay	15
Clay to Market	83
Market to Mission	96
Subtotal	219
National Car Rental Building Area	
West Side	30
East Side	65
Subtotal	95
Agriculture Building Area	47
Ferry Building Area	
South Side	24
East Side	19
Subtotal	43
TOTAL	688

1. Spaces operated/owned by the Port of San Francisco

Source: Wilbur Smith & Associates

The Port also operates 688 off-street long-term spaces (see Table F-1) 219 of which are under The Embarcadero Freeway, 54 of which are north of The Embarcadero, 230 of which are in Pier 1, and the remaining spaces which are located near the Ferry and Agricultural Buildings.

Truck Loading: There are no yellow or special truck loading zones in the project area. There is a loading dock located near the north end of the Bay side of the building which serves the World Trade Club. This facility provides five loading bays which can be accessed via a fire lane along the north side of the building. Club management reported an average of 30 deliveries occurring each day between 7:30 and 11:30 a.m. This does not serve tenants at the south end of the building, located 600 feet away. Trucks also load from the paved area along the Bay side of the south end of the building, although no formalized loading docks or bays are provided.

Pedestrian Systems: The most heavily traveled pedestrian path in the vicinity of the project is the crosswalk across The Embarcadero between Justin Herman Plaza and the entrance to the Ferry Building. Pedestrian counts performed on Wednesday, June 24, 1981 indicate peak hour pedestrian demand occurs just after the morning arrival of the Larkspur Ferry at 8:15 a.m., when over 300 pedestrians use the crosswalk in a five minute period. Pedestrian flows during the noon hour, 12:00 a.m. to 1:00 p.m., are less than either the morning or afternoon peaks, with a five minute peak flow rate of 100 pedestrians and approximately 1,200 pedestrians per hour.

The minimum effective sidewalk width between the hallways leading to the Golden Gate ferries and the front of the Ferry Building Main Entrance is defined by the 90 degree turn these pedestrians must take between these two points and by the pillars within this path. The minimum effective sidewalk width between these two paths is approximately 10 feet. Pedestrian volumes recorded between the hallways leading to the ferries and the crosswalk in front of the Ferry Building Main Entrance were analyzed according to the following standards contained in Pushkarev and Zupan's Urban Space for Pedestrians:

DESCRIPTION	FLOW RATE (persons/minute/foot of sidewalk width)
Open	Less than 0.5
Unimpeded	0.5-2
Impeded	2-6
Constrained	6-10
Crowded	10-14
Congested	14+

During the morning peak 5 minutes of pedestrian activity after the arrival of the 8:15 a.m. Larkspur Ferry, the pedestrian level of service in front of the Ferry Building is in the "constrained" range. During this period, pedestrians were observed to overflow onto the parking lot area to avoid sidewalk congestion. During the afternoon peak of pedestrian activity prior to the departure of the 5:25 p.m. Larkspur Ferry, the pedestrian level of service is in the "impeded" category. The east side of The Embarcadero provides a walkway which now generates recreational jogging and walking activities, particularly during the weekday noon-hour. During this period "impeded" pedestrian service levels occur in front of the Ferry Building.

Two traffic signals control the crosswalk in front of the Ferry building: One for stopping traffic on The Embarcadero northbound and one for stopping traffic on The Embarcadero southbound. The two signals operate simultaneously on a forty second cycle which provides 21 seconds of green time to vehicles on The Embarcadero and 13 seconds of green time to pedestrians crossing The Embarcadero. Because the forty second cycle length is roughly the same time it takes for pedestrians to walk from one signal to the other, most pedestrians who leave the first curb on the walk signal arrive at the next signal at the beginning of its walk phase. The lights are thus timed to minimize delay to pedestrians.

The existing traffic signal at The Embarcadero and Mission Street does not have pedestrian clearance intervals sufficiently long enough to allow pedestrians to reach the median of The Embarcadero before the light changes. The clearance interval is defined as the time required for a pedestrian to cross a roadway if he or she walks at the rate of four feet per second, or average walking speed.[1] This signal setting causes a hazardous as well as disconcerting condition for pedestrians crossing The Embarcadero. Pedestrian

activity at this intersection is currently not high, although continued development in this region is likely to increase foot traffic there in the future.

Muni bus stops on the northbound portion of The Embarcadero are located just north of the main entrance to the Ferry Building and directly in front of the Agriculture Building. The stop in front of the Agriculture Building is not adequately signed, and cars are often parked within it.

Sidewalk facilities in front of the Ferry Building are not well suited for pedestrians travelling north or south along The Embarcadero. The sidewalk in front of the Ferry Building's main entrance clings to the edge of the recessed front or arcade of the building north and south of the main entrance. Most pedestrians walking along The Embarcadero view this as an indirect route and choose to walk down the center of the parking aisles in front of the building.

Two handicapped parking spaces are present in the off-street parking meter areas near the entrance to the Ferry Building: one just north of the main entrance and one just south of the main entrance. However, a handicapped ramp from the parking area to the sidewalk in front of the main entrance is present only from the south parking area.

The area along The Embarcadero is frequented by joggers, particularly during the noon hour. Vehicles emerging from the Pier 1 bulkhead often have difficulty seeing oncoming joggers.

Bicycle Circulation: Drumm Street is the only designated bikeway in the vicinity of the project as designated by the San Francisco Comprehensive Plan. Spear and Market Streets are designated as streets to be improved as bike routes. Bicycle racks are provided just south of the Ferry Building's main entrance under the building awning but are used primarily for motorcycle parking.

Traffic Volumes: Peak hour (4:45-5:45 p.m.) traffic volumes recorded by the consultant at Missions Street and The Embarcadero on Thursday, June 18, 1981,

showed approximately 1,260 southbouund vehicles and 1,070 northbound vehicles per hour on The Embarcadero in front of the site. Average daily traffic (ADT) on The Embarcadero was recorded as approximately 21,2000 vehicles.[2] Peak hour traffic volumes on The Embarcadero Freeway in the vicinity of the site are estimated at 7,100 vehicles per hour, with an annual ADT of approximately 71,000 vehicles.[3] Intersection level-of-service analyses were made at the intersection of The Embarcadero and Mission Street, the closet signalized intersection to the site. Traffic turning movement volume counts were conducted at this intersection on Thursday, June 18, 1981. The existing level-of-service of this intersection was determined using the critical lane method.[4]

Level-of-service is a measure of the vehicular conditions which are experienced at an intersection under given conditions of traffic flow. The service level is determined by comparing intersection traffic flow for each traffic movement with the capacity of the intersection to accommodate each movement. The resulting volume/capacity ratio determines the level of service as shown in Table F-2.

The intersection of The Embarcadero and Mission Street was determined to be operating at Level B. Although the northbound approach to the intersection on The Embarcadero was constrained to just one lane due to construction activity at the time of the count, the intersection analysis assumes that two lanes of traffic would be provided under normal conditions. Peak hour counts were also conducted at The Embarcadero-Washington Street intersection (August 20, 1981). This intersection was also operating at level-of-service B.

Cumulative Travel Demand Methodology

Travel demand from the 16.1 million gross square feet of net new cumulative office development and 535,000 gross square feet of net new cumulative retail development in downtown San Francisco has been estimated using a land-use approach for trip generation. Future travel into the downtown has been assumed to be a result of construction and occupancy of downtown office and retail space. The Office of Environmental Review of the Department of City

TABLE F-2

VEHICULAR LEVELS OF SERVICE

Level of Service	Description	Volume/Capacity[1] v/c Ratio
A	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	0.60
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can be generaly described as very good.	0.61-0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71-0.80
D.	Level of Service D describes a condition of increasing restiction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81-0.90
E	Capacity occurs at level of service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting up-stream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91-1.00
F	Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.00

1. Capacity is defined as Level of Service E.

Source: San Francisco Department of Public Works, Traffic Division, Bureau of Engineering, 1965.

Planning (DCP) has identified office projects in the greater downtown area as being under formal review, approved or under construction. Table F-3 shows the list of projects separated by review status and includes Assessor's Block number and DCP case number for each project. Table F-4 contains the total gross square feet of office and retail space for each review status category. The information contained in these tables represents the best data available from the Department of City Planning at the time of preparation of this document.

The list of projects shown in Table F-3 and the development totals shown in Table F-4 include all office projects in the greater downtown area and the south of Market area that are under construction or have been approved, and all projects for which a Preliminary Draft EIR has been submitted to the City for review or for which plans are well defined, and all office projects in redevelopment areas that are under construction or for which Land Disposition Agreements have been approved by the San Francisco Redevelopment Agency Commission. Projects that were not definitive and/or appear to be inactive or withdrawn by the project sponsor were not included in the cumulative analyses.

Hotel projects have not been included in the cumulative analyses because hotel uses have different peaking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit. Residential projects have not been included because residential travel in the downtown is generally in the contra-commute direction during peak-hours and because the office trip generation rate and modal split distribution are predicated on the assumption that housing would be available in the City. Thus inclusion of residential projects would be double counting of project generated travel.

Two redevelopment areas (Yerba Buena Center and Rincon Point - South Beach) and one private development (Mission Bay) are located in or near the greater downtown area. In the redevelopment areas the majority of building sites do not yet have Land Disposition Agreements (LDA) approved. Until such time as Specific LDA's are approved, no estimate of travel demand can be made (thus, parcels for which no LDA exists have not been included in the cumulative

analyses). Development in the Yerba Buena Center (YBC) Redevelopment Area will be in accordance with the YBC Redevelopment Plan, as amended. Possible land uses that would be in accordance with the Yerba Buena Center Redevelopment Area Plan include commercial entertainment, convention facility (in place), cultural, downtown support service, exhibit/ballroom space, hotel rooms, institutional, light industry, market-rate dwelling units, subsidized dwelling units, office, park or plaza, pedestrian concourse, parking and, retail.[5] Possible land uses in the Rincon Point - South Beach Redevelopment Area include hotel, housing, office, open space, public parking, retail and, warehouse uses.[6] Mission Bay has not been included in the cumulative analyses as no application has been submitted to the City and it is uncertain what formal proposal may be made.

TABLE F-3
CUMULATIVE OFFICE DEVELOPMENT[1]
IN DOWNTOWN SAN FRANCISCO OF AUGUST 6, 1982

PROJECTS UNDER FORMAL REVIEW

Assessor's Block	Case No.	Project Name
58	82.234ED	Roundhouse
112	81.258	Ice House Conversion (C)
136	81.245	955 Front at Green
176	81.673	Columbus/Pacific Savoy
228	81.610ED	569 Sacramento (C)
240	81.705ED	580 California/Kearny
265	81.195ED	388 Market at Pine
269	81.132ED	Russ Tower Addition
270	81.175ED	466 Bush
288	81.461ED	333 Bush (Campeau)
288	81.687ED	222 Kearny/Sutter
669	81.667ED	1361 Bush (C)
716	81.581ED	Polk/O'Farrell
3702	81.549ED	1145 Market
3703	81.494ED	1041-49 Market
3707	81.492ED	90 New Montgomery
3707	81.245C	New Montgomery Pl.
3708	81.493ED	71 Stevenson
3733	82.29E	832 Folsom
3760	81.386	401 6th
3776	81.59	Welsh Commons
3778	81.630ED	548 5th/Brannan
3781	82.99E	Greyhound Bus Terminal
3786	82.33E	655 5th/Townsend
3789	82.31EV	615 2nd/Brannan (C)
9900	81.63	Ferry Building Rehab

(continued next page)

TABLE F-3 (continued)

APPROVED PROJECTS

Assessor's Block	Case No.	Project Name
106	81.415ED	1299 Sansome
161	80.191	Mirawa Center
164	81.631D	847 Sansome
164	81.573D	50 Osgood Place
166	CU81.7	222 Pacific (C)
166	80.15	750 Battery
206	81.165D	401 Washington at Battery
227	80.296	Bank of Canton
261	81.249ECQ	333 California
262	81.206D	130 Battery
267	81.241D	160 Sansome
268	81.422D	250 Montgomery at Pine
271	81.517	453 Grant
271		582 Bush
294	82.870	44 Campton Place
311	82.120D	S.F. Federal
351	DR79.24	Mardikian/1170-1172 Market
3512	82.14	Van Ness Plaza
3518	81.483V	291 10th St.
3705	80.315	Pacific III Apparel Mart
3709	81.113ED	Central Plaza
3715	82.16EC	121 Steuart
3717	80.349	Spear/Main (160 Spear)
3717	82.82D	135 Main
3722	81.548DE	466 Clementina (C)
3722	81.417ED	144 Second at Minna
3724	81.102E	Holland Ct. (C)
3729	82.860	774 Tehama
3733	81.2	868 Folsom
3735	80.106	95 Hawthorne (C)
3738	DR80.5	315 Howard
3741	82.203C	201 Spear
3749	81.18	Marathon - 2nd & Folsom
3751	77.220	National Maritime Union
3752	77.220	Office Bldg. (YBC SB-1)
3763	81.287V	490 2nd at Bryant (C)
3763	81.381	480 2nd at Stillman (C)
3775	81.147V	338-340 Brannan (C)
3776	81.693EV	539 Bryant/Zoe
3788	81.296Z	690 2nd/Townsend (C)
3787	81.306	252 Townsend at Lusk
3789	81.552EV	625 2nd/Townsend (C)
3794	81.569EV	123 Townsend
3803	81.244D	China Basin Expansion

(continued next page)

TABLE F-3 (continued)

PROJECTS UNDER CONSTRUCTION

Assessor's Block	Case No.	Project Name
163	81.1	901 Montgomery
164	81.251D	936 Montgomery-(disco)
167		Golden Gateway III
196		736 Montgomery
196	CU79.49	Pacific Lumber Co.
208	81.104EDC	Washington/Montgomery
237	DR80.6	353 Sacramento (Daon)
239	DR80.1	456 Montgomery
240	DR80.16	550 Kearny
263	CU79.12	101 California
287	81.550D	Sloane Building (C)
288	DR80.24	101 Montgomery
289	81.308D	One Sansome
292	DR79.13	Crocker National Bank
312	79.370	50 Grant
351	79.133	U.N. Plaza
762		Opera Plaza
3702	81.25	1155 Market/8th
3708	80.34	25 Jessie/Ecker Square
3709	80.36	Five Fremont Center
3712	79.11	Federal Reserve Bank
3715		141 Steuart
3717	79.236	101 Mission at Spear
3717		150 Spear
3718	79.12	Pacific Gateway
3724		Yerba Buena West
3735		Convention Plaza

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1. Includes all office projects in the greater downtown area and the South of Market area for which a Preliminary Draft EIR has been submitted to the City for review or for which plans are well defined, and all office projects in redevelopment areas that are under construction or for which Land Disposition Agreements have been approved. It does not include projects in the Rincon Point - South Beach or Yerba Buena Center Redevelopment Areas for which no Land Disposition Agreements have been approved by the San Francisco Redevelopment Agency Commission, as it is not possible to know what development will be approved in these areas. It does not include Mission Bay as no formal proposal has been submitted to the City and the project is still in early planning stages.

2. The letter (C) after a project refers to a conversion (generally industrial and/or warehouse space to office space).

Source: Department of City Planning.

TABLE F-4

GROSS SQUARE FEET OF CUMULATIVE OFFICE AND RETAIL DEVELOPMENT[1] IN DOWNTOWN SAN FRANCISCO AS OF AUGUST 6, 1982

	Office (Gross Sq. Ft.)		Retail (Gross Sq. Ft.)	
Status of Project	Total New Constr.	Net New Constr.	Total New Constr.	Net New Constr.
Under Formal Review	4,220,970	3,801,570	310,650	249,150
Approved	5,428,350	4,862,600	187,850	150,310
Under Construction	7,753,050	7,427,350	260,250	136,050
GRAND TOTALS	17,402,370	16,091,520	758,750	535,510

1. Includes all office projects in the greater downtown area and the South of Market area for which a Preliminary Draft EIR has been submitted to the City for review or for which plans are well defined, and all office projects in redevelopment areas that are under construction or for which Land Disposition Agreements have been approved. It does not include projects in the Rincon Point - South Beach or Yerba Buena Center Redevelopment Areas for which no Land Disposition Agreements have been approved by the San Francisco Redevelopment Agency Commission, as it is not possible to know what development will be approved in these areas. It does not include Mission Bay as no formal proposal has been submitted to the City and the project is still in early planning stages.

Source: Department of City Planning.

Existing office and retail space that would be replaced by new buildings was subtracted from the proposed new construction to better approximate the impacts the new buildings would have on transportation facilities. As shown in Table F-4, net new office and retail space is less than total new construction as a result of subtracting out existing office and retail space on sites proposed for new buildings. ("Net new" space is used to refer to the amount of new construction in excess of existing space on each site in terms of gross square feet of floor space. It does not refer to net leasable or net rentable floor space).

Estimates of future travel have been made using trip generation rates of 17.5 person trip ends (one way trips) per 1,000 net leasable square feet of net

new office space and 100 person trip ends (pte) per 1,000 gross square feet of net new retail space.[7] Gross square feet of office space was converted to net leasable square feet by assuming an efficiency factor of 80%. The retail space has been assumed to be primarily "ground-floor retail" which would serve the office building users. Based upon survey data collected at the Embarcadero Center, approximately 45% of the travel generated by "ground-floor retail" uses has been assumed to be oriented to the office uses on-site and is already included in the office trip generation rate. Thus, 55% of the retail trip generation has been assumed to be "new" to each site.[8]

P.M. peak-hour travel from the cumulative development was assigned to modes of travel based upon the regional distribution and modal split shown in Table F-5. During the p.m. peak hour about 20% of the office travel and 10% of the retail travel was assumed to occur. Of the office travel approximately 90% [during peak-hours] was assumed to be work-related and 10% was assumed to be other travel. On a daily basis, office travel was assumed to be 57% work-related and 43% other travel.[9]

To calculate vehicle trip ends, average automobile occupancies were assumed for each regional area based upon available data. Currently, commute travel to the East Bay is about 1.8 persons per vehicle; the north Bay is about 1.5 persons per vehicle; and to the Peninsula is about 1.2 persons per vehicle.[10] San Francisco auto occupancy was assumed to be 1.4 persons per vehicle.[11]

A basic assumption in all of the transportation analyses is that existing regional distributions and modal splits would continue into the future unchanged. Thus, the implicit assumption has been made that about 40% of the future employees would live in San Francisco. If housing is not available in the City then a greater impact than noted would result on the commute corridors into the City from the North Bay, East Bay and Peninsula. If housing is not available in the City, however, the impact on the MUNI would be less than noted because City residents are the majority of Muni users.

TABLE F-5

TRAVEL DISTRIBUTION AND MODAL SPLIT

Geographic Area	OFFICE Work Travel Geog. %[1]	Mode	%[2]	OFFICE Other Travel Geog. %[1]	Mode	%[2]	RETAIL Travel Geog. %[1]	Mode	%[2]
San Francisco									
Downtown/Northeast (East of Van Ness, North of Market to the Embarcadero, South of Market to 101)	7.0	Auto	9.0	33.0	Auto	2.0	84.0	Auto	3.0
		Muni	61.0		Muni	20.0		Muni	7.0
		BART	1.0		BART	0.0		BART	1.0
		Walk	29.0		Walk	78.0		Walk	89.0
Northwest (Richmond, Marina Western Addition)	15.0	Auto	31.0	11.0	Auto	15.0	1.0	Auto	10.0
		Muni	69.0		Muni	85.0		Muni	90.0
Southwest (Sunset, Parkside, Ingleside, Excelsior, Twin Peaks, and Upper Market)	13.0	Auto	29.0	13.0	Auto	12.0	2.0	Auto	10.0
		Muni	62.0		Muni	69.0		Muni	80.0
		BART	9.0		BART	19.0		BART	10.0
Southeast (Potrero Hill, Bayview, Hunters Point, East and South of 101)	5.0	Auto	26.0	7.0	Auto	13.0	2.0	Auto	10.0
		Muni	52.0		Muni	38.0		Muni	80.0
		BART	22.0		BART	50.0		BART	10.0
Peninsula (San Mateo and Santa Clara Counties)	18.0	Auto	44.0	8.0	Auto	50.0	3.0	Auto	25.0
		Muni	3.0		Muni	0.0		Muni	0.0
		BART	19.0		BART	30.0		BART	25.0
		SamT	7.0		SamT	10.0		SamT	0.0
		SPRR	27.0		SPRR	10.0		SPRR	50.0
East Bay (Alameda and Contra Costa Counties)	30.0	Auto	33.0	20.0	Auto	13.0	6.0	Auto	38.0
		BART	37.0		BART	79.0		BART	62.0
		A-C	30.0		A-C	8.0		A-C	0.0
North Bay[3] (Marin and Sonoma Counties)	12.0	Auto	58.0	8.0	Auto	70.0	2.0	Auto	70.0
		GGTB	35.0		GGTB	20.0		GGTB	30.0
		GGTF	7.0		GGTF	10.0		GGTF	0.0

1. Percent of travel with origins or destinations in each geographic area.
2. Percent of travel in each geographic area using listed mode of travel.
3. GGTB stands for Golden Gate Transit Bus; GGTF stands for Golden Gate Transit Ferry.

Source: San Francisco Department of City Planning, TJKM.

Transit: Transit demand has been projected based upon existing travel patterns and is not dependent upon the availability of transit capacity. Two levels of operations (load factor) calculations have been made. One load factor has been calculated based upon existing capacity and is intended to represent conditions that would result if no improvements are made to the transit system. The second load factor is calculated based upon forecast capacity (as defined in each agency's five-year plan) and is intended to portray conditions that would result if planned, scheduled improvements are made.

Pedestrian Impacts: With the renovations of the Ferry Building, pedestrian access to the Golden Gate ferries will be rerouted through the main entrance to the Ferry Building. The minimum effective sidewalk width for access to and from the ferries will thus be increased from 10 to approximately 40 feet. The absolute maximum capacity of a Golden Gate ferry as established by the Coast Guard is 725 passengers. Pedestrian levels of service through the Ferry Building would be in the "impeded" range even when all 725 passengers exited the facility within a five minute period. Since the olden Gate Bridge Highway and Transportation District estimates that 555 persons is the practical ferry capacity, the above case represents an extreme condition. Average patronage on peak hour ferries is currently 404 passengers. This level of service would be an improvement over the observed "constrained" pedestrian service level which currently exists with less than capacity ferry patronage.

The project will also provide improved pedestrian facilities along The Embarcadero which will tie into the Waterfront Promenade under construction between the Agriculture Building and Pier 24. A system of other similar promenades is planned north of the site. Pedestrians travelling north or south along The Embarcadero may choose to access the Galleria through the length of the project, or use the widened sidewalk in front of the project which will replace much of the existing metered off-street parking. The Waterfront Promenade should generate additional recreational walking and jogging along the waterfront and The Embarcadero frontage of the Ferry Building. The actual magnitude of this recreational demand is difficult to estimate. Because of the recreational nature of the facility, however, it is

TABLE F-6

EXISTING AND PROJECTED MUNI LOAD FACTORS [1]
(PM PEAK HOUR -- OUTBOUND DIRECTION)

	RIDERSHIP				LOAD FACTORS			
Line	Existing	Future w/o project	project	Future w/project	Existing	Future w/o project	Future w/project	project
1X	640	871	5	876	1.11	1.51	1.52	0.01
2	474	663	4	667	1.10	1.54	1.54	0.01
5	981	1499	7	1506	0.94	1.44	1.44	0.01
6	544	831	4	835	0.84	1.28	1.29	0.01
7	407	622	3	625	0.77	1.18	1.18	0.01
8	657	1004	5	1009	0.74	1.13	1.14	0.01
9	468	715	3	718	0.89	1.35	1.36	0.01
11	184	281	1	282	0.64	0.97	0.98	0.01
12	451	689	3	692	0.85	1.30	1.31	0.01
14	1038	1586	8	1594	0.92	1.41	1.41	0.01
14GL	205	312	2	314	0.71	1.09	1.09	0.01
14X	344	484	3	487	0.68	0.96	0.97	0.01
21	643	982	5	987	0.85	1.30	1.31	0.01
31	657	938	5	943	1.07	1.53	1.54	0.01
31X	413	562	3	565	0.96	1.30	1.31	0.01
32	476	617	4	621	0.79	1.03	1.03	0.01
38	1963	2738	15	2753	1.01	1.41	1.42	0.01
38AX	453	617	3	620	1.26	1.71	1.72	0.01
38BX	272	370	2	372	0.96	1.31	1.32	0.01
41TC	119	166	1	167	0.41	0.58	0.58	0.01
41MC	184	258	1	259	0.43	0.60	0.60	0.01
42	393	594	3	597	0.99	1.50	1.51	0.01
71	447	683	3	686	1.10	1.67	1.68	0.01
80X	416	586	3	589	0.83	1.16	1.17	0.01
J	909	1389	7	1396	0.84	1.28	1.28	0.01
KLMN	5725	8747	42	8789	0.96	1.46	1.47	0.01

1. The load factor is the ratio of ridership to existing capacity, where capacity is calculated from the recommended maximum loading of the transit vehicles which is 150% of seated capacity. As estimates of load factors, these should be regarded as approximate. Muni cordon points, where the ridership and capacity counts were made, do not necessarily correspond precisely to the point of maximum loading on each line. The future load factors have been calculated using existing capacity.

Source: Department of City Planning; Frederick Dock, Traffic Engineer

unlikely that its use would exceed an "impeded" service level of about 500 pedestrians per hour during a weekday noon hour.

Pedestrian impacts on the crosswalk across The Embarcadero directly in front of the Ferry Building were estimated based on the total additional daily person trip generation of the project. Since no parking is proposed on the Ferry Building site, it was estimated that as much as 80 percent of all auto, transit and pedestrian trips generated by the site would ultimately reach the site on foot from this crosswalk. Increased activity at the Agriculture Building as well as along the Waterfront Promenade south of the Agriculture Building will result in increased pedestrian use of the Mission/Embarcadero intersection. This intersection links the project with the Transbay Terminal, existing and planned development south of Market Street, and the diversity of south of Market parking sites. While pedestrian service levels would not reach unacceptable levels, existing signal timings do not provide adequate clearance intervals to insure safe pedestrian crossing of The Embarcadero at this intersection.

Parking: The availability of short-term parking was estimated in an area within 1000 feet of the project (which was assumed to represent a 5 minute walking time). Projects proposed and under construction that would generate short-term parking demand within the 1,000 ft. radius area were identified and the short-term parking demand was summed to give a projection of short-term demand. Long-term parking demand was based upon the number of expected work-related auto trips into the downtown. Parking supply was estimated over the greater downtown and South of Market area as travel time from parking space to final destination was no longer assumed to be the primary determinant for parking selection.

Traffic: Vehicle travel and parking demand have been based upon demand projections and are unconstrained by the ability of the freeway and bridge system to carry the additional demand. Freeway and bridge capacity into downtown is essentially fixed at existing levels as major construction would be required to add new capacity. Current levels of vehicle traffic on the freeway and bridge system are at or near capacity. Thus, if the projection of person trip ends in autos is assumed to be correct, the levels of vehicle

occupancy would have to increase in the future as the freeway and bridge system could not handle an appreciable increase in autos at the peak hour. If vehicle occupancy were to increase, vehicle trip ends and subsequent parking demand would be less than projected. Alternately, the peak hour level of demand could spread into hours adjacent to the peak hour (as is currently happening). However, there is a finite limit as to how far the peak can spread over time and still allow business to function.

Employment Trend Approach to Cumulative Analysis

In this and other San Francisco EIRs, a land-use type of approach has been used to estimate the transportation impacts of both the proposed project and cumulative development. An alternate type of approach is to forecast travel demand based upon regional projections of employment share (employment trend approach).[12] Briefly, the fundamental differences between (and limitations of) the two approaches are:[13]

The land-use approach (as it has been applied in this EIR) has used net new office space actually proposed or under construction (less space in buildings demolished to make way for new buildings) as the basis for travel generation. The land-use approach assumes that literally all of the currently proposed development in the downtown area will be constructed and fully occupied within the time frame of the Ferry Building Rehabilitation project development and occupancy. No allowance has been made for less than 100 percent occupancy, for proposed developments that are never constructed, or for those which would not be occupied within the time frame of the Ferry Building Rehabilitation project.

The employment trend approach generates a total increase in employment in downtown that has taken account of loss of employment as industries and offices move out of the City, replacement of one type of industry with another (industry shifts), as well as replacement of existing office space with new office space. The employment trend approach makes no implicit assumptions concerning occupancy rates or actual square footage of development constructed; rather, it generates total employment increases from a standpoint which assigns jobs by metropolitan sector (area) based upon

extrapolation of past trends and which considers long-term industry shifts to, within, and away from each area.

Note that neither of the two approaches has attempted to project future changes in modal split.

To illustrate the differences in projections resulting from the two approaches, Table F-7, following, shows the total employment projections by the two methods (and the project's share thereof), the regional distribution of trips, and Muni's share of the new transit travel (and the project's share thereof).

As shown in the table, the employment trend approach predicts about 15 percent fewer employees in the downtown and about eight percent more riders on the Muni than does the land-use approach. The employment trend approach would thus approximate the transit demand impacts discussed on p. of the EIR.

Several considerations concerning both of the methods need to be noted. The land-use approach, as it has been applied in San Francisco EIR's, analyzes impacts for the p.m. peak hour, whereas the employment trend approach analyzes the a.m. peak. Several reasons exist as to why one peak (or the other) may be the better one to analyze.

First, the p.m. peak may be more useful to analyze, in that actual observation shows that the p.m. peak has a greater overall effect on the local street network and transit system in the downtown area than does the a.m. peak, as more travel takes place during the p.m. peak. Also, transit service is more inclined to differ from scheduled times during the p.m. peak than during the a.m. peak, as operational delays have had an 8- to 10-hour period over which to accumulate. Finally, the on-ramps to the freeway/bridge system are greater bottlenecks (in the p.m. peak) than are the off-ramps (in the a.m. peak).

TABLE F-7

COMPARISONS OF LAND-USE AND EMPLOYMENT TREND APPROACHES

Approach	Downtown Employment Increase	Project Share[1]	Regional Trip Share S.F.	Pen.	E.B.	N.B.	Muni Peak-hour Increase[2]	Project Share[3]
Land Use	64,400	1.0%	49%	16%	24%	11%	12,000	1.3%
Employment Trend[4] (maximum)	56,100	1.1%	50-54%	19%	17-21%	10%	12,900[5]	1.2%

NOTE: As explained in the text, comparisons between the entries for the two approaches must be made with the understanding that the land-use approach reflects increases in employment and transit demand based solely upon increases in downtown office space, while the employment trend approach reflects total increases therein based upon historical trends. The differences among the regional trip share figures reflect these and the other differences between the two approaches.

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1. Employment generated by the proposed Ferry Building Rehabilitation project, as a percent of the cumulative downtown employment increase.

2. The Muni peak-hour increase is a demand projection (based upon existing and long-term employment trends) that is not dependent upon available or expected transit capacity.

3. Muni peak-hour trips generated by the proposed Ferry Building Rehabilitation project, as a percent of the cumulative downtown Muni peak-hour increase.

4. These figures, represent the worst-case analysis under the employment trend approach reviewed and accepted by MTC, ABAG and Muni. Note that the land-use approach entries assume that an additional net new 16.1 million gross square feet of office space will come on line by late 1990.

5. Based on 54 percent regional trip split to San Francisco (worst-case).

Conversely, the peaking characteristics of the a.m. peak may be more useful in that they are much sharper than those of the p.m. peak (i.e., a greater percentage of the peak-period travel occurs during a single hour). Also, as a result of the bridge system into San Francisco, travel inbound into the City is much easier to document, as tolls are collected on the inbound direction on the Golden Gate and Bay Bridges. Finally, a greater proportion of the travel occurring during the a.m. peak is employment-related; the p.m. peak includes

shopping and pleasure trips which are not directly affected by increased office space.

The land-use approach, as it has been used in this EIR, examines the p.m. peak because it has been observed to be the worst case for congestion on the City transportation system. This analysis does not reflect the spreading of the p.m. peak that is currently occurring, as all of the new trips have been assumed to take place in a single hour.

While the land-use approach assumes all new office space is fully occupied, the assumption of a functional vacancy rate of 5 percent is not uncommon.[13] With 16.1 million square feet of new office space assumed in the land-use approach to be occupied by 1990, a 5 percent vacancy would amount to approximately 805,000 square feet, representing 7,200 employees (at 250 square feet per employee), 600 of which would ride Muni in the p.m. peak hour. This adjustment for vacancy would thus reduce Muni peak-hour impacts in the cumulative analysis stated above by these 600 riders.

The land-use approach calculations have assumed transit capacity to be fixed at existing levels. The OER memorandum[13] points out, "It should be recognized that transportation is a more 'elastic' resource with many options for expansion including increasing existing capacity by using articulated vehicles, expanded car pool and van pool programs and increasing the peak commuter period through flex-time programs, among others."

If future office development does not occur along the lines of the past long-term trends as assumed in the employment trend approach, then the projections made in Working Paper I would be revised. The average annual growth during the period 1965-1980 was less than the growth per year proposed, approved, or under construction for the period 1980-1984. The employment trend approach assumes average growth through 1990 would be at the lower historic rate, reflecting activity fluctuations from the current rate including slowdowns due to changing business conditions.

Until a forecast exists to determine how the current decade's cycle of development may differ from the past, a judgment of the applicability of

results from Working Paper I may not be made. Consequently, this EIR has retained the land-use approach and presented this comparison of the employment trend approach. Both methods should be looked upon as describing potential scenarios of future conditions.

Footnotes.

1. U.S. Department of Transportation Manual on Uniform Traffic Control Devices for Streets and Highways, Washington, D.C. U.S. Government Printing Office, 1978, page 4D-5.
2. Traffic Flow Map, Department of Public Works, 1978.
3. 1980 Traffic Volumes on California State Highways, Caltrans, Sacramento, 1981.
4. Interim Materials on Highway Capacity, Transportation Research Board, Circular 212, January 1981.
5. Land uses from Draft Second Supplement Yerba Buena Center Final Environmental Impact Report, San Francisco Department of City Planning May 28 1982.
6. Land uses from Rincon Point - South Beach Redevelopment Area, San Francisco, California, Final Environmental Impact Report/Environmental Impact Statement, San Francisco Department of City Planning certified November 5, 1980.
7. The regional distribution, office trip generation, trip purpose and peak hour percentage are from Attachment 1 of the Guidelines for Environmental Impact Review, Transportation Impacts Department of City Planning, October 1980 and the modal split assignment is from Attachment 2 supplemented by survey data collected by Environmental Science Associates, Inc.
8. Retail trip generation is from Trip Generation, Institute of Transportation Engineers (ITE), 1979. Rates have been adjusted from vehicle trip ends to person trip ends based upon an assumed vehicle occupancy of 1.4 persons per vehicle. The survey of retail travel was conducted at Embarcadero Center on Thursday, June 17, 1982 between 10:00 a.m. and 4:00 p.m.
9. The percentage of work and non-work trips is from the Guidelines (see

note 7) and from Urban Travel Patterns for Hospitals, Universities, Office Buildings, and Capitols, Report No. 62, National Cooperative Highway Research Program.

10. East Bay auto occupancy is from data collected at the Bay Bridge toll plaza by the Metropolitan Transportation Commission; North Bay auto occupancy is from data collected at the Golden Gate Bridge toll plaza by the Golden Gate Bridge, Highway and Transportation District; Southern Peninsula auto occupancy is an estimate from CalTrans.
11. The occupancy rate is from The Downtown Traffic and Parking Study, San Francisco Department of Public Works, 1970.
12. Department of City Planning, Working Paper I, Projection of Long-range Transportation Demand, May, 1982, prepared in cooperation with the Metropolitan Transportation Commission (MTC), the Association of Bay Area Governments (ABAG), and the Municipal Railway (Muni). Employment trend data was compiled by ABAG from trends in County Business Pattern (U.S. Department of Commerce, Bureau of the Census, March 12, 1979), with 1979 as the base year for future projections and regional distributions. Modal split data are from the 1975 Travel Survey prepared by MTC.
13. The Department of City Planning, Office of Environmental Review (OER), has issued a memorandum, dated July 2, 1982, dealing with the subject of the differences in the land-use and employment trend approaches, and recommending that both approaches be used in future EIRs to give a more balanced assessment of future peak transportation demand. This memorandum is on file with and available from the Office of Environmental Review, 450 McAllister St., 5th Floor. The memorandum calls out some of the fundamental differences between the two approaches and also details the limitations of each approach.

APPENDIX G

METHODOLOGY FOR SURVEYS AND PROJECTIONS FOR EMPLOYMENT, HOUSING AND FISCAL FACTORS

FOR
THE FERRY BUILDING COMPLEX

EE 81.63

October 26, 1981
Revised August 15, 1982

Richard Dodson, Ph.D.

PLANNING ANALYSIS & DEVELOPMENT

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In this Appendix some of the methodologies used to estimate the employment, housing, and fiscal impacts of the proposed Ferry Building Complex is explained. The methodologies used to describe the existing tenants and employees and to project the types of tenants and employees that would occupy the site are both discussed. First, the survey of existing tenants and employees in the Ferry Building Complex is described. Next, the two post-occupancy surveys of recently occupied office buildings--444 Market and 595 Market--are described. Third, the method used to project the characteristics of the occupants of the proposed project is outlined. Finally, some of the features of the projection methodology developed for this EIR are outlined.

I. SURVEY OF EXISTING TENANTS AND EMPLOYEES

In order to describe the existing Ferry Building Complex tenants and their employees, a survey of the three buildings in the Complex was conducted in July, 1981. Planning, Analysis & Development staff went office to office in the three buildings identifying current tenants. The survey was administered in one of four ways. For the largest tenants a letter requesting cooperation with the survey was sent to a responsible individual identified with the help of Port of San Francisco personnel. A sample of this letter is included at the end of this appendix. Surveys were delivered by hand, after telephone contact. For smaller tenants PAD personnel visited the office directly, and identified a person to be responsible for handling the survey. Then, at both large and small offices the person handling the survey was asked to complete the survey form then and there. If this person preferred, however, the survey forms were left and picked up the next day. Administration of the survey included explaining the purpose of the survey, the role and affiliation of PAD, the EIR process, survey requirements, and the survey questions themselves. This amount of explanation led to the high response rate for the survey.

Each tenant was asked to fill out a tenant questionnaire, which asked for information on the tenant, such as type of business, number of persons working at that location, and the number of years the tenant had been in the Complex. In addition, each tenant was asked whether they would return to the Complex after rehabilitation if rents were as high as $30 per square foot (sf) per year. Each tenant was then asked (whether or not they said they would return) where the firm would relocate if the firm did not return to the Complex. The actual questionnaire used follows at the end of this appendix. One hundred tenants were identified at the time of the survey, all of whom completed questionnaires.

Each of the tenants was then asked to have employees actually working in the buildings complete a separate employee questionnaire, one for each employee. The employee questionnaire in-

cluded questions on where the employee lived, usual method of transportation to and from work, and occupation. The person responsible for answering the tenant questionnaire also coordinated the filling out of the employee questionnaires. If the questionnaires were completed while PAD staff were present, then questions from employees were answered then and there; otherwise, questions were channeled through the responsible person in the firm. A copy of the employee questionnaire is attached at the end of this appendix.

The number of employees identified in the tenant survey was 958. Of these, 721 completed employee questionnaires, for a response rate of 75%. While this response rate is high compared to other such surveys, effectively it is even higher. Those employees not responding fall into four categories: 1) those not getting the questionnaire due to a breakdown in communication or distribution; 2) those not there the day of the survey, due to absenteeism; 3) those not normally in the office, such as sales persons; and 4) actual refusals. Nonresponses due to the first reason were reduced by careful personal monitoring by PAD staff. However, nonresponses in the second category were abnormally high, since July is a month when many employees take vacation. If the absentees and those working outside the office (the exact number of either could not be determined) could be subtracted from the total number of employees, the effective response rate would be shown to be much higher. Moreover, an examination of response rates by type and size of firm suggests that there is no bias in the responses. The failure to find any bias, coupled with the high response rate and with the even higher effective rate, indicate that the survey results accurately represent the population of employees in the Ferry Building Complex.

After all the survey responses were gathered, several steps were taken to prepare the information for data processing and eventual analysis for the text of the Preliminary Draft EIR. The survey forms were already precoded with column numbers and codes for rapid data entry. The first step was to hand edit each of the forms--to clean up ambiguous responses (such as check marks in between lines), to check consistency (such as taking BART from Marin to work), and to post-code open-ended responses (such as the combinations identified in the transportation question). After hand editing, each of the forms was keyed to disk, and then verified, to remove all keying errors. As the last step of the data processing, the distributions of each of the variables were checked for out-of-range responses and for inconsistencies. Then to prepare the information for analysis, a computer file was prepared of the tenant responses and of the employee responses. For the employee responses tenant information was attached, so that, for example, occupations of employees for each type of firm could be determined.

The completed questionnaires are on file at Planning, Analysis & Development's office. Distributions of all responses to the two surveys are available in the form of computer printout at the Office of Environmental Review. However, the most important information from the survey is contained in the text of the report.

II. POST-OCCUPANCY SURVEYS

In order to project what types of tenants and what types of employees would occupy the proposed project, two post-occupancy surveys were conducted in July and August, 1981. The two most recently occupied office buildings in the Financial District, 444 Market and 595 Market, were chosen for the surveys. The 595 Market building was first occupied in May, 1979 (with full occupancy in March, 1981), and the 444 Market building was first occupied in August, 1980 (with full occupancy in May, 1981). As the two most recently occupied buildings (at the time of the survey), these two buildings offered the most up-to-date information on the effects of new office development. One other building was considered for inclusion in the surveys, 333 Market, but was finally dropped due to difficulties in contacting tenants; moreover, this building has been occupied longer (for three years) than the other two buildings. In this section the conduct of the surveys is described, with the use of the surveys discussed in the next section on projection methodology.

The administration of the post-occupancy surveys closely followed that of the Ferry Building Complex survey, with one exception. For the post-occupancy surveys the cooperation of the Chamber of Commerce was enlisted, along with the building managers of each of the buildings. A letter was sent to each tenant (as identified by the building managers) requesting cooperation in the survey, with the signatures of an official of the Chamber of Commerce and of the building manager. Copies of one of these letters for each of the buildings follow at the end of this appendix. Additional cover letters were written by some of the larger tenants and included along with the employee questionnaires when distributed.

As for the Ferry Building Complex, each tenant was asked to fill out a tenant questionnaire, which asked for information on the tenant, such as type of business and number of persons working at the location. The questionnaire used for the Ferry Building Complex was modified with additional questions to determine the impact of new development. Tenants were asked where they were located prior to occupying their new space. Tenants were also asked how many employees were added since the firm moved to the new building. The actual questionnaire used follows at the end of this appendix. Seventeen tenants were identified at 444 Market, all of whom responded to the survey. Twenty-six tenants

were identified at 595 Market, of which two small tenants (with a total of twelve employees) did not respond.

As in the case of the Ferry Building Complex survey, employees were asked to complete a separate employee questionnaire, one for each employee. Employees in the post-occupancy survey were asked several additional questions. In addition to being asked where they lived at the time of the survey, they were also asked where they lived before they moved to the new building, so that employee moves as a result of firms moving could be determined. In addition to being asked how they traveled to and from work at the time of the survey, employees were also asked how they traveled to and from work before they moved to the new building, so that the transportation impacts of firms moving could be determined. Employees were also asked whether they were working for their present employer when the firm moved to its new location. Using this question the employment impacts of firms moving could also be determined. Finally, employees not living in San Francisco were asked whether they would like to live in San Francisco. Those answering yes were then asked why they were not living in San Francisco. These two questions were asked to determine the demand for housing, and to ascertain supply constraints. For example, those not living in San Francisco but wanting to were asked if the price of housing was the reason for not moving to San Francisco. A copy of the post-occupancy survey employee questionnaire is attached at the end of this appendix.

The number of employees identified in the tenant survey of 444 Market was 1927. Of these, 1081 completed employee questionnaires, for a response rate of 56%. The number of employees identified at 595 Market was 1528. Of those, 929 completed employee questionnaires, for a response rate of 61%. While this response rate is lower than for the Ferry Building Complex, it is still higher than other such surveys. In addition to the problem of vacationing employees, large space users at both buildings were less sure of the number of employees, especially since several tenants were using the space as temporary or overflow space. The lower response rates are for the larger tenants, but the information from these tenants is not used in the projection methodology, since such tenants would not be included per the sponsor's program.

The same steps were followed in data processing the questionnaires as were detailed above for the Ferry Building Complex survey. The completed questionnaires are on file at Planning, Analysis & Development's office. Computer printout is available at the Office of Environmental Review. However, only information pertinent to the Ferry Building EIR is included in the text. Other analyses of this data will be available in the future from Planning, Analysis & Development.

III. PROJECTION METHODOLOGY FOR OCCUPANCY OF THE PROPOSED PROJECT

In order to determine the impacts of the proposed project on employment, housing and fiscal factors, some way must be found to project the types of tenants and employees who would be likely to occupy the buildings in the project if it were built. Then, by comparing the existing tenants and employees to the projected tenants and employees the likely net impacts of the project can be estimated. Previous EIRs have used two approaches to define the possible occupants. The first is to assume that the future occupants would be just like existing occupants of other buildings in the area. For example, to estimate where employees in proposed projects would live, recent EIRs assume that 40% would or want to live in San Francisco, because 40% of employees in surveys done in the Financial District live in San Francisco. The second is to assume that all tenants would be in the financial, real estate, and insurance (FIRE) sector of the economy. For example, to estimate wages of employees in proposed projects in order to calculate the payroll tax or derive retail expenditures, recent EIRs use wages for FIRE employees, as published by the Bureau of Labor Statistics. Often these two approaches are combined in the same EIR.

There are some difficulties with these two approaches, however. First, for most projects the mix of tenants and employees will be different from the mix of a particular building in 1975 (the date of the frequently used Bank of America Data Center EIR, EE74.128) or even in 1981. Assuming that future tenants and employees would be the same as past or current tenants and employees in a particular building may be a mistake. Not only will there be changes over time as development occurs and the economy of San Francisco changes, but, more importantly, there will be differences as each developer tries to mold the uses in the project. Moreover, if the project has certain or possible major tenants, then knowledge of these tenants should be incorporated into the estimation of impacts. Second, the assumption that most tenants would be in the FIRE sector may be mistake, leading to overestimation of wages of new employees, etc. In the 444 Market building only 24% of the tenants were in the FIRE sector, and only 18% of the employees. At 595 Market the figures were 48% and 59% respectively. (Moreover, the occupations of employees may be more useful in estimating wages than their industrial sector.) Especially if the developer has a definitive program then the types of tenants can be refined. For example, if retail space is planned then care should be taken in assuming that all employees would be (like) FIRE employees.

Projecting the future occupants of the Ferry Building Complex is facilitated by two aspects of the proposed project. First, the project includes rehabilitation, as well as new construction. Rehabilitation, coupled with the sponsor's desire for certain tenants to return and a plan for accommodating tenants during

rehabilitation, means that the proposed project would be occupied by existing tenants who would return, as well as by new tenants. Thus, by determining which tenants would be likely to return, the characteristics of some of the tenants and employees can be readily determined. Then, the projection methodology can concentrate on new tenants and their employees. Second, the developer has a detailed program, which specifies square footages by office, retail and resturant uses. Also specified for Pier One are the the kinds of office tenants--world trade and/or water-related.

The information used in the projection includes:

1) the survey of existing tenants and employees in the Ferry Building Complex--which is used to determine which tenants would return, the characteristics of returning tenants and employees, and the characteristics of new tenants and employees similar to existing tenants and employees.

2) the sponsor's proposed uses and floor areas for project buildings--which are used to define the type (office, retail or resturant) and number of tenants for each building;

3) average square footage per employee requirements for the various uses--which are used to calculate the space requirements of returning tenants and the number of employees of new tenants; and

4) the post-occupancy surveys of tenants and employees at 444 Market and 595 Market--which are used, when similar in use, to characterize the new tenants and employees.

How each set of information is used in the projection methodology is described below, as are the steps in the projection methodology.

The steps of the projection methodology are as follows:

1) determine which tenants would return and how much space they would occupy in the proposed project;

2) calculate the amount of space remaining that would be occupied by new tenants by each type of tenant (office, retail and resturant) and the number of employees of these new tenants;

3) match characteristics of employees by type of tenant to the number of new tenants, so that the new employees can be described;

4) combine the characteristics of returning tenants and employees with the characteristics of new tenants and employees for the final picture of the proposed project.

Each of these steps is described in detail below.

Step 1.

To determine which tenants would return, the existing 100 tenants at the site were asked whether they would return to the site after rehabilitation, even if the rent were as high as $30 per sf per year. The tenants were then asked where they would relocate, if they did not return to the site. Although only 12 firms said they definitely would return, only 13 firms said they would not return and would move outside San Francisco. Of the 100, 22 firms said they would not return and would move somewhere else in San Francisco. The rest of the tenants were uncertain about whether they would return and/or about where they would go if they did not return. Those saying they would not return but would stay in San Francisco could be assumed to be possible returnees, given the rents they would probably face elsewhere in San Francisco in 1985. For this analysis the conservative assumption was made that only those certain they would return or uncertain about whether they would return are assumed to be returnees. Several tenants who stated that they would not return also noted that they would return if the rents for the project were competitive. This assumption that uncertain tenants would be possible returnees is also bolstered by the sponsor's stated encouragement of existing tenants that they return to the site after rehabilitation. Uncertain tenants would meet prices similar to those at the project and would thus have no price-related reason not to return. Also, many of the existing tenants are world trade or water-related, with locational preferences for the area; moreover Pier One would be oriented to such firms. As such, 53 tenants are assumed to be possible returnees.

To determine to which buildings the returning tenants would return requires the sponsor's proposed floor areas and uses, which are shown in Table 2 (p. 24). In addition to the uses and square footages shown, the sponsor also proposes that the Pier One be occupied by world trade center offices and other water-related uses.

To determine how much space the returning tenants would occupy, average square footage per employee standards are used. Office employees are assumed to require 250 sf per employee, and retail and resturant employees are assumed to require 500 sf per employee. These figures correspond to existing uses at the site and to projected uses in other EIRs.

Using the responses to the survey, the proposed uses, and the employee square footage requirements, the area occupied by returning tenants by building can calculated. Office space in the Ferry Building would be occupied by space users now in all three buildings. Returning office space users now have 221

employees, as determined in the tenant survey. These 221 employees would occupy 55,250 sf (221 x 250 sf per employee). The 40,500 sf of resturant space in the Ferry Building for returning tenants would be occupied by the World Trade Club, with a total of 81 employees. Returning tenants now in the Agriculture Building are shown returning to the Ferry Building. The 71,750 sf of office space in Pier One for returning tenants would be occupied by tenants who are world trade or water-related and now in all three buildings, with a total of 287 employees. The 1,500 sf of resturant space in Pier One for returning tenants would be occupied by resturant tenants now in Pier One, with a total of three employees. (Although returning tenants have been placed in specific buildings, the projection results are insensitive to this placement.) Thus, the 592 employees of returning tenants would occupy 169,000 sf in the proposed project.

Step 2.

Now, the amount of space remaining to be occupied by new tenants can be calculated. The total square footages by use and by building minus the square footages of returning tenants as determined in step 1 equals the square footages that would be available to new tenants. Then, the number of employees of new tenants can be determined. Given the square footages, and the use and space requirements, the number of new employees can be calculated. For example, in the Ferry Building returning office tenants would occupy 55,250 sf, with the sponsor's total proposed office space for the Ferry Building at 186,120 sf. As such, there would be 130,870 sf available for new tenants. Divided by 250 sf per employee for office workers, the 130,870 sf would be occupied by tenants with 523 employees (130,870/250). Similar calculations were done for each of the uses for each of the buildings. New tenants would have a total of 1,254 employees. The total number of all employees would be 1,846.

Step 3.

Now that the number of new and returning employees by use and by building have been identified, some way must be found to characterize the new employees. Where would they live? How would they get to work? What would their occupation be? This information is readily available for employees of returning tenants from the tenant and employee surveys done in the Ferry Building Complex. The approach used here is to disaggregate the new employees by type of use, and then to identify a pool of employees of tenants with similar uses among those surveyed, matching the new employees to the surveyed employees.

The new employees can be categorized by the following uses: 1) general office; 2) world trade and/or water-related office; 3) resturant; and 4) retail. The new employees of office tenants

would occupy the Ferry Building, with 523 new employees. The new employees of world trade and/or water-related office tenants would occupy Pier One, with 430 new employees. The new employees of resturants would occupy all three buildings, for a total of 110 new employees. The new employees of retail establishments would occupy the Ferry Building, with 168 new employees.

Fcr the projection of the characteristics of employees of new general office tenants, the survey results from the existing Ferry Building tenants could not be relied upon, because most of the smaller tenants are world trade and/or water-related. Moreover, some of those tenants would leave due to higher rents. As such, the office tenants in the two the post-occupancy surveys are used. The question could be asked whether these Financial District tenants and employees would be at all like the future Ferry Building Complex tenants and employees. Given how close the Complex would be to the Financial District, the rents that would be charged, the kind of space being designed, and the current spillover of Financial District space users into other areas of San Francisco, the assumption of comparability is plausible. The types of office tenants that would occupy the Complex would be very similar to other office tenants.

For the projection of the characteristics of employees of new world trade and/or water-related tenants, the survey results from the existing Ferry Building Complex can be relied upon. This is because new tenants would most likely be similar to existing tenants who would return if rents were higher.

For the projection of the characteristics of workers at new resturants the data base from all the surveys is not as rich. The resturant workers now at the Ferry Building Complex are used as matches for the new employees. While this match may be a good fit, the projection methodology would benefit from a larger sample of resturant workers in the area. The two buildings in the post-occupancy surveys did not have resturants workers to interview.

For the projection of the characteristics of employees of new retail establishments, the two post-occupancy surveys are more useful. This is because there are so few retail tenants now at the Ferry Building Complex. The 73 retail employees at the two buildings in the post-occupancy surveys are used to match the new retail employees at the proposed project. If the exact types of retail tenants at the proposed project were known, then the projection could benefit from other surveys of retail workers. However, the retail workers at the two buildings in the post-occupancy surveys provide a sufficient match in the absence of this detailed picture of retail uses.

To see exactly how the matching is done the example of office tenants in the Ferry Building is used. There would be 523 new employees in that building. Questionnaires were completed by 1937 employees of office tenants in the two buildings in the post-occupancy surveys. The characteristics of the 523 new employees in the Ferry Building--their counties of residence, modes of transportation to and from work, their occupations--are taken to be the same as for the 1937 employees in the two post-occupancy surveys. For example, 31% of the 1937 office employees at 444 and 595 Market live in San Francisco. As such, the same percentage of new office employees that would be in the Ferry Building are projected to live in San Francisco.

Step 4.

Now that the returning and new tenants and employees can be characterized, some way must be found to combine the various types of tenants and employees by use. To continue the above example, the counties of residence (focusing on San Francisco residence for ease of presentation) can be found for each group. From the Ferry Building Complex survey, 51% of returning tenants would live in San Francisco. From the matching procedure described above which draws from all three surveys, 31% of new office employees would live in San Francisco, 47% of world trade and/or water-related new employees would live in San Francisco, 74% of resturant new employees would live in San Francisco, and 44% of new retail employees would live in San Francisco. However, some way must be found to combine these various percentages to get an overall percentage for the entire Complex. The technical solution used here is called weighting. Two types of weights are involved, weights for matching and weights for response rate.

For example, to use the characteristics of the 1937 employees referred to above to project the characteristics of the 523 new employees, a weight has to be calculated and applied. For this set of employees the weight is 1937/523, so that each response in the post-occupancy surveys of office tenants is given a weight of 0.27. For the employees of world trade and/or water-related tenants returning, a weight has to be calculated to take into account the response rate for these employees. Such tenants had 287 employees, of whom 206 completed questionnaires. Thus, the weight for these employees is 287/206 or 1.39. Thus, the 44% total percentage of employees who would live in San Francisco is made up of the sum of each of the percentages by use times the weight for that use times the number of employees projected for that use, divided by the total number of employees projected for the Complex, 1846 employees.

IV. FEATURES OF THE PROJECTION METHODOLOGY

Several features of the projection methodology are apparent. The impacts of a proposed project on employment, housing and fiscal factors can be precisely estimated with this new methodology. For example, on the issue of residence and housing, different estimated impacts due to the project result from other assumptions and methodologies. If the employees were assumed to be just like existing Ferry Building Complex employees, then the percentage living in San Francisco would be set at 43%. If past surveys were used, the percentage would be set at 40%. If the results of current surveys were used, like the two post-occupancy surveys (without narrowing down which employees were comparable as was done here by focusing on office and retail tenants), the percentage would be set at 32%. Instead, the percentage is estimated at 44%. Differences as large as 10% have quite a bit of effect when determining the impacts of changes in residence patterns. And these same kinds of differences by approach exist for occupation, industry, and mode of transportation to and from work. The projection methodology does make a real difference in the types of impacts estimated for a proposed project.

One further feature of the projection methodology is that it can incorporate the results of any further surveys or additional data. The generalized methodology can be used to add the results of surveys from the past or the results from any new surveys such as those planned for the Downtown EIR (if they can be provided at the individual respondent level).

One final feature of the projection methodology is that it can be applied to any new project under consideration, if that proposed project has a program by square footages for specific uses, as most proposed projects do. Moreover, the methodology would allow the impacts of a proposed project under various scenarios of uses and square footages to be played out.

PLANNING ANALYSIS & DEVELOPMENT
945 Front Street, Suite 206
San Francisco, California 94111
(415) 398-8066

June 29, 1981

Mr. Steve Luczo
Port of San Francisco
Ferry Building
San Francisco, CA 94111

Dear Mr. Luczo,

As you may know, the Ferry Building, the Agriculture Building and Pier 1 are going to be rehabilitated. This will require relocation of building tenants during construction. Consequently, an Environmental Impact Report is being done so that the effect of the proposed rehabilitation can be determined. Planning Analysis & Development is doing this study. One of the things we want to know is how the tenants of these buildings will be affected. In order to learn this, we would like you to fill out a short questionnaire and return it to the above address. In addition, we would like to follow up the questionnaire by asking the people who work here where they live and how they get to work. In order to gather this information, we will call on you or someone designated by you in order to distribute a second questionnaire. A copy of the employee questionnnaire is also enclosed with this letter.

If you have any questions regarding this matter, please call me at the above telephone number.

Thank you for your cooperation.

Cordially,

Gloria Root, Principal

GR:aag
Enclosures

San Francisco
Chamber of Commerce

July 14, 1981

Ms. Judy Addison
Office Manager
Xerox Learning Systems
444 Market Street
San Francisco, CA 94111

Dear Ms. Addison:

The City of San Francisco is considering policies that require developers of office buildings to provide housing. This housing would be for employees attracted to San Francisco as a result of taking a job in new office buildings. Presently, this requirement is made in conjunction with the approval of an Environmental Impact Report (EIR) for new buildings. The City Planning Department applies a formula to all proposed office buildings to determine the number of housing units that the developer must build.

The San Francisco Chamber of Commerce, in conjunction with Planning Analysis & Development, a consulting firm, are doing a survey to determine the number of office workers who do or would like to live in the City. We hope to do this by looking at the residence locations of employees in recently occupied office buildings. This information will be used to predict the housing and transportation impacts of the proposed Ferry Building renovation project. The data will also be used in the Downtown EIR jointly sponsored by the Chamber of Commerce and the City Planning Commission. We request your participation in the surveys as a means to improve planning for the City and downtown area and help shape policies to guide development.

Attached to this letter are two survey questionnaires: one is for building tenants, the other is for their employees. The enclosed employee survey is only a sample for your review. The tenant survey seeks information concerning the previous location of the firm, the number of workers presently employeed at this location, the number of new employees added since moving to this location and the type of business performed by the firm. We would like the personnel officer or person in charge of the office to fill out the tenant survey and review the employee survey. The employee questionnaire asks about the county in which an employee lives, means of travel to work, any changes in residence or travel mode since moving to the building and locational preferences for housing.

A staff person for Planning Analysis & Development will collect the tenant questionnaires and distribute the employee questionnaires. She or he will be accompanied by Kathy Cole of the Daon/Cadillac Fairview building management group.

Thank you for your cooperation.

Sincerely,

Richard B. Morten
Vice President
Chamber of Commerce

Kathy Cole
Daon/Cadillac Fairview

Gloria Root
Planning Analysis &
Development

465 CALIFORNIA STREET, SAN FRANCISCO, CALIFORNIA 94104, TELEPHONE 415-392-4511

San Francisco
Chamber of Commerce

July 29, 1981

Dear Ms. Kommatsu:

The City of San Francisco is considering policies that require developers of office buildings to provide housing. This housing would be for employees attracted to San Francisco as a result of taking a job in new office buildings. Presently, this requirement is made in conjunction with the approval of an Environmental Impact Report (EIR) for new buildings. The City Planning Department applies a formula to all proposed office buildings to determine the number of housing units that the developer must build.

The San Francisco Chamber of Commerce, in conjunction with Planning Analysis & Development, a consulting firm, is doing a survey to determine the number of office workers who do or would like to live in the City. We hope to do this by looking at the residence locations of employees in recently occupied office buildings. This information will be used to predict the housing and transportation impacts of the proposed Ferry Building renovation project. The data will also be used in the Downtown EIR jointly sponsored by the Chamber of Commerce and the City Planning Commission. We request your participation in the survey as a means to improve planning for the City and downtown area and help shape policies to guide development.

Attached to this letter are two questionnaires: one is for building tenants, the other is for their employees. The enclosed employee questionnaire is only a sample for your review. The tenant questionnaire seeks information concerning the previous location of the firm, the number of workers presently employed at this location, the number of new employees added since moving to this location and the type of business performed by the firm. We would like the personnel officer or person in charge to fill out the tenant questionnaire and review the sample employee questionnaire. The employee questionnaire asks about the county in which an employee lives, the means of travel to work, any changes in residence or travel mode since moving to the building and locational preferences for housing.

Chris Fitzgerald of Planning Analysis & Development will collect the tenant questionnaires and distribute the employee questionnaires. He may be reached at 398-8066, to answer any questions you may have.

Thank you for your cooperation.

Sincerely,

Richard B. Morton
Richard Morton
Chamber of Commerce

Pamela J. Lofgren
Pam Lofgren
Marathon U.S. Realty

Gloria Root
Gloria Root
Planning Analysis & Development

465 CALIFORNIA STREET, SAN FRANCISCO, CALIFORNIA 94104, TELEPHONE 415-392-4511

FERRY BUILDING TENANT SURVEY

As you may have heard, the Ferry Building and Agriculture Building will be rehabilitated in the near future. Consequently, an Environmental Impact Report is required. Planning Analysis & Development is working on that study. In connection with the study, we need to find out how tenants will be affected by the rehabilitation plans. We would like the person in charge of this office to answer the following questions so that we may obtain information needed for the study.

1. Name of the company _____

2. Title of person responding _____

3. Type of business (check one): 1
   - Import/export related _____ 1
   - Travel related _____ 2
   - Professional _____ 3
   - Retail/restaurant _____ 4
   - Other service _____ 5
   - Government _____ 6
   - Other (specify) _____ 7

4. Number of persons working here _____ 2-3

5. How long has the company occupied space here? _____ years. 4-5

6. Would the firm return to the building after it is rehabilitated, even if the rent is as high as $30 per square foot per year? yes _____ 1 no _____ 3 6
   don't know _____ 2 not applicable _____ 4

7. If the firm would not return to the Ferry Building or the Agriculture Building, where would it relocate? (check one) 7
   - Somewhere else in San Francisco? _____ 1
   - Outside San Francisco? _____ 2
   - Unsure _____ 3

Thank you for your cooperation.

FERRY BUILDING EMPLOYEE SURVEY

1. In what county do you presently live? (check one) 1

San Francisco	1
Marin	2
Alameda	3
Contra Costa	4
San Mateo	5
Santa Clara	6
Other _____	7

2. What is your usual method of transportation to and from work? If you usually use more than one type of transportation to get to work or from work or both, please write your answer in the space provided for combinations. 2-3

	TO WORK	FROM WORK
I drive alone (automobile, van, truck, motorcycle, etc.)	1	1
Carpool	2	2
Someone drops me off/picks me up	3	3
MUNI	4	4
BART	5	5
AC Transit	6	6
Golden Gate bus and ferry	7	7
SP Railroad	8	8
Greyhound bus	9	9
Walk	10	10
Bicycle	11	11
Hitchhike	12	12

Combinations of the methods listed above?

To work: _____

From work: _____

3. How would you best describe your work? (check one) 4

Clerical	1
Professional or Technical	2
Manager, Administrator or Official	3
Proprietor	4
Retail Sales	5
Wholesale	6
Food Service	7
Other Service & Maintenance	8
Other (specify) _____	9

POST-OCCUPANCY TENANT SURVEY

Planning Analysis & Development, a San Francisco planning firm, is conducting a survey of tenants and their employees in recently occupied office buildings in San Francisco. This is being done in connection with the Ferry Building Environmental Impact Report. The information provided by this survey will help in understanding the impact of new office buildings in the city. We would appreciate your taking the time to answer the questions below. This questionnaire will be followed by a questionnaire distributed to your employees. An example of that questionnaire is attached. As you can see, we are interested in the counties your employees live in and how they travel to work. We want to compare this to where they lived and how they travelled to work before the firm moved to this building. We are also interested in the number and kinds of jobs your company provides.

The day after we are notified by the building manager that you have received this questionnaire, we will contact the personnel manager or head of the office to collect the questionnaire. Based on the response to the question regarding the number of employees at each firm, a Planning Analysis & Development staff person will supply the correct number of employee questionnaires. This will be done in the morning, and the staff person will pick up the forms that same afternoon at 4PM. Should you have any questions, please call Kathy Cole of the Daon Corporation (391-4445), or Gloria Root at Planning Analysis & Development (398-8066).

Thank you for your cooperation.

1/1
/ / / / 2-4

1. Where was your firm located prior to moving to this building? (check one) 5

   In San Francisco's Financial District _____1
   In San Francisco outside the Financial District _____2
   Outside San Francisco _____3
   Was not in business _____4

2. How many people are employed by the firm in this building? _____ 6-8

3. How many employees have you added since moving here?
   (Do not count replacements due to turnover) _____ 9-11

4. Which category best describes your company? (check one) 12
   Financial, insurance or real estate _____1
   Services (health, legal, education, social, amusement, recreation, repair, research, business services, hotels, etc.) _____2
   Transportation and public utilities _____3
   Construction _____4
   Manufacturing _____5
   Wholesale and retail _____6
   Government _____7
   Other (Specify) _____8

Name of Firm _____

Name and Title of Person Responding _____

POST-OCCUPANCY EMPLOYEE SURVEY

Planning Analysis & Development, a San Francisco planning firm, is conducting a survey of employees working in recently occupied office buildings in downtown San Francisco. The information provided by this survey will help in understanding the environmental impact of new construction in the city. We would appreciate your taking the time to answer the questions below. Your answers will be kept confidential, and your name need not appear anywhere on the form. Should you need assistance in completing the questionnaire, please ask the person who handed you the survey form when they return to pick up the forms.

2/1
/ / / / 2-4

1. In which county do you now live? (check one) 5

San Francisco	1	San Mateo	4
Marin	2	Santa Clara	5
Alameda	3	Contra Costa	6
Other (specify)			7

2. In which county did you live before you worked in this building? (check one) 6

San Francisco	1	San Mateo	4
Marin	2	Santa Clara	5
Alameda	3	Contra Costa	6
Other (specify)			7

3. What is your usual method of transportation to and from work? If you usually use more than one type of transportation to get to work or from work or both, please write your answer in the space provided for combinations. (check one) 7-8

	TO WORK	FROM WORK	9-10
I drive alone (automobile, van, truck, motorcycle, etc.)	1	1	
Carpool, vanpool	2	2	
Someone drops me off/picks me up	3	3	
MUNI	4	4	
BART	5	5	
AC Transit	6	6	
Golden Gate bus and ferry	7	7	
SP Railroad	8	8	
SamTrans	9	9	
Walk	10	10	
Bicycle	11	11	
Hitchhike	12	12	
Other (specify) _____	13	13	

Combinations of the methods listed above?

To work: _____

From work: _____

over

4. **What was your usual method of transportation to and from work before you worked in this building?** (check one) 11-12

	TO WORK	FROM WORK	13-14
I drove alone (automobile, van, truck, motorcycle, etc.)	1	1	
Carpool, vanpool	2	2	
Someone dropped me off/picked me up	3	3	
MUNI	4	4	
BART	5	5	
AC Transit	6	6	
Golden Gate bus and ferry	7	7	
SP Railroad	8	8	
SamTrans	9	9	
Walk	10	10	
Bicycle	11	11	
Hitchhike	12	12	
Other (specify) _____	13	13	

Combinations of the methods listed above?
To work: _____

From work: _____

5. **Were you working for your present employer when the firm moved to this building?** yes _____1 no _____2 15

6. **Which of the following categories best describes your job?** (check one) 16

Clerical	1	Professional or Technical	5
Proprietor	2	Manager, Administrator or Official	6
Retail sales	3	Food service	7
Wholesale	4	Other service and maintenance	8
Other (specify) _____			9

7. **Answer this question only if you do not live in San Francisco: Would you like to live in San Francisco?** yes ___1 no ___2 not sure ___3 17

If you answered yes, why aren't you now living in San Francisco? 18
(check the most important reason)

Housing is too expensive in San Francisco.	1
The right kind of housing is not available.	2
Rental units are hard to find.	3
It's hard to find housing in the right neighborhood.	4
The quality of public services, such as schools is not good.	5
Other (specify) _____	6

Thank you for completing this questionnaire. Please return it to the personnel manager or the head of the office. If they are not available, please return it to the receptionist by 4PM this afternoon. A Planning Analysis & Development staff member will pick up the questionnaire at the end of the day.

APPENDIX H: NORTHEASTERN WATERFRONT PLAN

AMENDMENTS TO THE NORTHEASTERN WATERFRONT PLAN NECESSARY TO APPROVE PROJECT

Pier One

Policy 1: Remove parking from the north apron. Retain and rehabilitate the existing shed. Provide continuous peripheral public access around the water sides of the pier shed.

Policy 2: Permit short-term parking to serve the Ferry Building inside the shed as an interim use until inland sites become available within reasonable walking distance of the Ferry Building. Allow a second deck within the shed for interim parking provided it is easily convertible to office use. Permit a limited amount of office, community facility and/or commercial recreation uses to integrate Pier One into the overall Ferry Building development, rather than isolate it as a parking structure.

Policy 3: Develop according to the following program:

Interim use
(whichever is less)
Short-term parking within shed
-up to 400 spaces or up to 145,000 sf
Office/Commercial Recreation
-up to 15,000 sf
Public access-perimeter aprons
-no less than 26,000 sf

Ultimate use:
Office, including up to 15,000 sf of commercial recreation and/or community facilities
-up to 160,000 sf
Public access-perimeter aprons
-no less than 26,000 sf

Pier One

Policy 1: Remove the parking from the apron and shed areas. Permit replacement of the existing shed with a three floor structure but retain bulkhead building. Provide continuous peripheral public access around the water sides of the pier.

Policy 2: Permit mainly office use with galleria/exhibit space and permit minor commercial recreation use to integrate Pier 1 into the overall Ferry Building development.

Policy 3: Permit short-term parking in the existing bulkhead building to serve commercial recreation use at the Ferry Building, Pier 1 and the Agriculture Building.

Ferry Building

Policy 1: Restore and adaptively reuse the Ferry Building and develop open spaces adjacent to the Ferry Building in general accord with the "Design Guidelines for the Restoration and Adaptive Reuse of the Ferry Building," dated July 1978.

Policy 2: Reuse the Ferry Building as follows: predominantly commercial recreation (shops and restaurants) on the ground floor, predominantly offices on the second floor, predominantly offices and existing commercial/recreation uses on the third floor.

Policy 3: Replace dilapidated portions of, and allow a limited extension to the bulkhead wharf between Pier One and the Ferry Building. Remove existing structures and create a plaza. Permit the extension of a glass arcade linking the Ferry Building with Pier One to provide pedestrian shelter, provided it does not block ground level views of the Bay.

Policy 4: Develop according to the following program:

Plaza, approx. 30,000 sf
Arcade, approx. 4,000-6,000 sf

Policy 5: Create a plaza for passive recreation use in front of the Ferry Building between Pier One and the Agriculture Building by the removal of parking and the reduction in width to two northbound lanes of The Embarcadero roadway. Design the plaza to create a visual setting for the Ferry Building and a symbolic terminus to Market

Ferry Building

Policy 1: Restore and adaptively reuse the Ferry Building in general accord with the "Design Guidelines for the Restoration and Adaptive Reuse of the Ferry Building", dated July 1978.

Permit the addition of two new wings on the bay side of the building separated by a plaza. Create a central atrium and a galleria running the length of the building.

Policy 2: Reuse the Ferry Building as follows: predominantly commercial recreation (shops and restaurants) use on ground floor; predominantly commercial recreation with office uses on second floor; predominantly office use on third floor. Permit an additional partial fourth floor east of the existing main nave for office use; limit its height to the height of the peak of existing nave.

Policy 3: Replace the dilapidated portions of the bulkhead wharf between Pier 1 and the Ferry Building. Remove the existing structure and create a plaza.

Policy 4: Create a plaza for passive recreation uses in front of the Ferry Building between Pier 1 and the Agriculture Building by the removal of parking and the reduction in width to two northbound lanes of the Embarcadero roadway. Design the plaza to create a visual setting for the Ferry Building and a symbolic terminus to Market Street. If found to be feasible after further analysis, extend the California Street

Street. If found to be feasible after further analysis, extend the California Street cable car down Market Street to the plaza and create a Muni bus stop just south of the east-west axis of the plaza along The Embarcadero. Use street furniture that provides weather protection and install additional ornamental double light fixtures like those presently used along The Embarcadero.

Policy 6: Improve pedestrian access through the Ferry Building between the Golden Gate Ferry Terminal and The Embarcadero. Create a continuous walkway along the eastern side of the Ferry Building of approximately 10,000 to 20,000 square feet that is separate from service vehicle access.

Policy 7: Allow on the BART platform, immediately east of and related to the Ferry Building, minor amounts of outdoor commercial uses which are consistent with the use of the platform as open space, such as a cafe, outdoor dining and flower vendors. Retain the existing restaurant, plaza and ferry terminal.

Agriculture Building

Policy 1: Restore and adaptively reuse the Agriculture Building for office use and possibly a visitor center. Remove, if feasible, the 1918 addition to the building and reuse the original 1915 structure. Create a plaza behind the building. Remove the parking on the platform adjacent to the existing restau-

cable car down Market Street to the plaza and create a MUNI bus stop adjacent to the east-west axis of the plaza along the Embarcadero. Use street furniture that provides weather protection and install additional ornamental double light fixtures like those presently used along the Embarcadero.

Policy 5: Would be the same as old Policy 6.

Policy 6: Allow on the BART Platform, immediately east of and related to the Ferry Building, minor amounts of outdoor commercial uses which are consistent with the use of the Platform as open space, such as a cafe, outdoor dining and flower vendors. Allow extension on the BART Platform of a two-story, semi-enclosed restaurant. Retain the existing restaurant, plaza and ferry terminal. Relocate the existing ferry pier from between Pier 1 and Ferry Building to the south side of the BART Platform.

Agriculture Building

Policy 1: Restore and adpatively reuse the Agriculture Building. Retain the original 1915 facades. Remove the 1918 addition and construct a new bay side addition. Provide a galleria running the length of the building open at either end to connect with public outdoor spaces including tidal stairs adjacent to the Embar-

rant and allow a limited amount of open air commercial recreational uses which are incidental to and compatible with the open space character of the plaza. If feasible, use wood planking over the deck and illuminate the plaza for night-time activities. Retain the existing restaurant.

Policy 2: Develop according to the following program:
Office:
- 12,000 to 15,000 sf
Visitor Center:
- Approx. 2,000 sf
Public Plaza
- Approx. 50,000 sf
Restaurant-existing
- Approx. 5,000 sf

Ferry Building Complex

This section is not now in the Northeastern Waterfront Plan.

cadero Promenade. Permit the addition of a partial third floor, to be no higher, except for the galleria skylight, than the peak of the exisiting roof. Use the first floor as a dining club to be relocated from the Ferry Building. Create a continuous walkway at the eastern side of building at least 15 ft. wide.

Policy 2: Remove the parking on the platform adjacent to the existing restaurant. Retain the existing restaurant.

Ferry Building Complex

Policy 1: Limit development of Pier 1, the Ferry Building, and the Agriculture Building as follows:

- All buildings, gross area 609,300 sf

- Total offices, up to 308,000 net rentable sf

- Total commercial recreation, up to 115,000 net rentable sf

- restaurant 37,000 (excluding Sinbad's and Ferry Plaza Restaurants)

- retail 66,000

- food hall 12,000

Ferry Building 247,400 net rentable

Agriculture Building 47,100 net rentable

Pier 1 165,000 net rentable

Open Space
- Walkable, public recreation, open space and public access 167,700 sf
- Interior public pedestrian circulation 60,400 sf

AMENDMENTS TO THE NORTHEASTERN WATERFRONT PLAN: ALTERNATIVE E-1. ADDITIONAL OFFICE DEVELOPMENT
(50,000 Square Feet Additional Throughout the Site)

Ferry Building Complex

The amendments required for this alternative would be the same as for the project, except for the following:

Ferry Building Complex

Policy 1: Limit development of Pier 1, the Ferry Building, and the Agriculture Building as follows:

- All buildings, gross area 659,300 sf

- Total offices, up to 358,000 net rentable sf

- Total commercial recreation, up to 115,000 net rentable sf

restaurant (excluding Sinbad's and Ferry Plaza Restaurants)	37,000
retail	66,000
food hall	12,000

- Open Space

  Walkable, public recreation, openspace and public access 167,700 sf

  Interior public pedestrian circulation 60,400 sf

AMENDMENTS TO THE NORTHEASTERN WATERFRONT PLAN:
ALTERNATIVE E-2: ADDITIONAL RETAIL/RESTAURANT (COMMERCIAL RECREATION) DEVELOPMENT

E-2(a): 1/3 Retail/Restaurant, 2/3 Offices, Calculated for the Entire Site
(38,000 Additional Square Feet of Retail/Restaurant, with Equivalent Reduction of Office)

Ferry Building Complex

The amendments required for this alternative would be the same as for the project except for the following:

Ferry Building Complex

Policy 1: Limit development of Pier 1, the Ferry Building as follows:

- All buildings, gross area 609,300 sf

- Total offices, 270,000 net rentable sf

- Total commercial recreation, 153,000 net rentable st

restaurant (excluding Sinbad's and Ferry Plaza Restaurant)	56,000
retail	85,000
foodhall	12,000

- Open Space

  Walkable, public recreation, open space and public access 167,700 sf

  Interior public pedestrian circulation 60,400 sf

E-2(b): 1/3 Retail/Restaurant, 2/3 Offices, Calculated for the Entire Site
(Including 10,500 sf Additional Retail/Restaurant at Pier 1, for a Total of 48,500 sf of Additional Retail/Restaurant and an Equivalent Reduction in Office)

Ferry Building Complex

The amendments required for this alternative would be the same as for the project except for the following:

Ferry Building Complex

Policy 1: Limit development of Pier 1, the Ferry Building, and the Agriculture Building as follows:

- All buildings, gross area 609,300 sf

- Total offices, 259,500 net rentable sf

- Total commercial recreation, up to 163,500 net rentable sf

restaurant (excluding Sinbad's and Ferry Plaza Restaurants)	61,250
retail	90,250
food hall	12,000

- Open Space

Walkable, public recreation, open space and public access 167,700 sf

Interior public pedestrian circulation 60,400 sf

E-2(c): 127,000 Square Feet Retail/Restaurant Instead of 115,000 with the Project

Ferry Building Complex

The amendments required for these altneratives would be the same as for the project except for the following:

Ferry Building Complex

Policy 1: Limit development of Pier 1, the Ferry Building, and the Agriculture Building as follows:

- All buildings, gross area 609,300 s.f.

- Total offices, up to 308,000 net rentable sf

- Total commercial recreation, up to 127,000 net rentable sf

restaurant (excluding Sinbad's and Ferry Plaza Restaurants)	49,000
retail	66,000
food hall	12,000

- Open Space

  Walkable, public recreation, open space and public access 167,700 sf

  Interior public pedestrian circulation 60,400 sf

ALTERNATIVE F-1:OFF-SITE MECHANICAL PARKING GARAGE

Ferry Building Complex

The amendments required for this alternative would be the same as for the project, except for the following:

Ferry Building Complex

Policy 1: Limit development of Pier 1, the Ferry Building, and the Agriculture Building as follows:

- All buildings, gross area 659,300 sf

- Total office, up to 358,000 net rentable sf

- Total commercial recreation, up to 115,000 net rentable sf

restaurant (excluding Sinbad's and Ferry Plaza Restaurants)	37,000
retail	66,000
food hall	12,000

- Open Space

  Walkable, public recreation, open space and public access 167,700 sf

  Interior public pedestrian circulation 60,400 sf

Policy 2: Provide required parking for Ferry Building Complex on an inland site within reasonable walking distance of the Ferry Building.

Delete Policy 3 for Pier 1 (See page A-127 of this table)